

Young The Newest *Cartwright*
Young Man's Companion,

Young Man's Companion
CONTAINING
A Compendious English Grammar.

A Compendious
INSTRUCTIONS to write Variety of Hands,
with COPIES both in Prose and Verse.

LETTERS on Compliment, Business,
Letters of Business
and several other OCCASIONS.

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TABLES shewing Accounts ready cast up; The Value of foreign
Gold; and the two great Roads from Edinburgh to London.

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from foreign Nations. A List of English Manufactures, &c.

Exercises
AND
An English Spelling Dictionary.

The whole calculated to qualify Persons for Business without the Help of
a Master, and illustrated with a Map of the World.

By THOMAS WISE, Accountant.

The FIFTH EDITION, greatly enlarged and improved.

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A COMPENDIOUS ENGLISH GRAMMAR.

GRAMMAR, in any language, is that art or science that teacheth the true and proper use of letters, syllables, words and sentences. And tho' several rules and observations, applicable only to one particular speech or tongue, are different from those of another, yet such as concern the general relation, that things have to their modes, qualities, motions or passions, are exactly the same in all the languages in the world; for any name, quality, &c. in the English language is the same in any other, though expressed in a different term. From whence may be perceived, how far the generality of people are mistaken, in the notion they have, that it is absolutely necessary for all young persons to read the Latin, or Lilly's grammar, before they can attain to a right understanding of the English: for all the grammars of the Latin tongue are mostly employed to teach the various terminations, &c. of the flexions, modes, formations, and words of that language, a matter which no way concerns the English. But there are some few general rules in that and all other grammars that may be applied to the English, or any other language whatever.

I shall not here enter into a critical dissertation upon each letter, nor divide them into vowels, consonants, mutes, liquids, &c. nor shall I divide the language into eight parts, as is generally done, but into four, viz.

pro-asp

NAMES.

AFFIRMATIONS.

QUALITIES. | PARTICLES, or the manner of words.

Names express the things themselves, *i. e.* every thing that is the object of our several senses, reflection, and understanding: which conveying some certain idea or image to the mind, want not the help of any other word to make them understood: as when we hear any one say, *a man, a horse, virtue, vice, &c.* we perfectly understand what he means.

Names express the things themselves, you cannot therefore put the word *thing* after them thus, *man thing, virtue thing, &c.* without making nonsense.

They admit of *a* or *the* before them, and *an* when they begin with a vowel.

There are two sort of Names, Common Names are such as agree to, or express the whole species; as the name *horse* signifies *my horse, your horse, and all the horses* that are.

Proper Names distinguish particulars of the species from each other, as *Cæsar, Pompey, Cato*, distinguish those men from the rest of mankind. The same holds of the proper names of *cities, towns, mountains, rivers, countries, &c.*

Qualities are the manners of Names, or things expressed by them, as *good, bad, round, square, &c.* For example: the being of *wax*, is the substance of *wax*, or *wax* itself, without regard to any form or colour, and is what we call the name, the roundness squareness, &c. of the figure are the manners of the being; as to be ignorant or knowing, are the manners or qualities of our being: thus we say a *good, bad, black, white, &c. horse; horse* is the name, and *good, bad, black, white, &c.* are the qualities of that name.

The 3d general head is the Affirmation, under which term the existence, action, or passion of the subject is affirmed, as *the black horse runs, the common-sewer stinks, the young child cries.* Here *black, common* and *young* are qualities, as expressing some mode or quality of their subjects or names, *horse, sewer, and child*; and the words *runs, stinks, and cries* denoting the several actions of their subjects or names. It is usual to call these by three dif-

ferent appellations, viz. *substantive*, *active*, and *passive*; those that are found to signify the being or existence of any thing, as *I am*, &c. are termed *substantives*; those that signify the acting or doing of any thing, as *I see*, &c. are termed *actives*; where passion or the suffering of any thing is signified, as *I am seen*, &c. they are *passives*.

The 4th class of words I call by the general name of *Particles*, which are occasionally made use of to make the sense of the speaker more full, clear, and intelligible, by expressing the manner, or other circumstances of the other words, either by connecting them together, or shewing the manners or qualities of them; viz. *John and Mary strive earnestly*; here, *and earnestly* are *particles*; and joining the two names *John, Mary*; *earnestly* shewing the mode of their striving.

A substantive has what is called two *numbers*, the one expressing only some one single thing of a sort or species, as *a man*, the other all above one, as *men*, viz. two, three, twenty, a thousand, &c. and this is called the plural number. The singular number is commonly distinguished by *a*, *an*, or *one*; as *a horse*, *a man*, *an image*, *an idiot*, *one child*, *one wife*, &c. The plural number is generally known by the words terminating with an *s*, or *es*; but the singular never, but in such as have a plural termination, tho' they have a singular meaning; as, *arm*, *arms*: *horse*, *horses*: *king*, *kings*: *stone*, *stones*, &c.

There are some exceptions to this general rule, but they are few in comparison to those that it comprehends: such as *ox*, *oxen*; *man*, *men*; *brother*, *brethren*; *cow*, *cows*, or *kine*: *mouse*, *mice*: *foot*, *feet*: *tooth*, *teeth*: *penny*, *pence*, &c. Singulars which end in *f* or *se*, have their plurals ending in *ves*; as *wife*, *wives*: *self*, *selves*; *knife*, *knives*: *wolf*, *wolves*, &c. And tho' most words, whose singulars end in *ff*, follow the general rule aforegoing, as *muff*, *muffs*, &c. yet *staff* makes *staves*, according to the latter rule.

Some terminate alike in both numbers, as *one sheep*, *ten sheep*: *one swine*, *ten swine*, &c.

There are some words that admit of no singular number, such as *ashes*, *bowels*, *creffes*, &c. And on the contrary there are a great many that want the plural number; such as proper names of men, women, places, crea-

tures and things ; as also their virtues, vices, habits, and abstract qualities, the generality of grains, spices, herbs, drugs and liquids, as, *wheat, rye, pepper, ginger, grass, air, blood, milk, &c.*

To the English language there belong three genders, which in conformity to the custom used in the Greek and Latin tongues, may be called *masculine, feminine* and *neuter* ; the *masculine* comprehending all males, *feminine* all females, and the *neuter* all things without life ; and these are thus distinguished by these terms, *he, his* or *him*, for the *masculine* ; *she, her, hers, &c.* for the *feminine* ; and *it* for the *neuter*, but the quality remains the same, and is as applicable to males as females, or things without life called *neuters*, as *a good boy, a good girl, a good knife, &c.*

Some *feminines* are formed by changing the termination of the *masculine* into *ess*, as *count, countess* ; *duke, duchess* ; *heir, heiress* ; *lion, lioness, &c.*

The English language has three persons, viz. *I*, the first ; *thou*, the second ; *he she, it*, the third, in the singular number ; and *we, ye, you, they, those*, in the plural ; to which may be added *who, whom* or *what*. These distinctions are absolutely necessary, as appears from the nature of speech, which is always employed about the person or persons, then immediately speaking, denoted by the characteristic *I* or *we* ; the person or thing spoken to, by *thou, ye* or *you* ; or the person or thing spoken of, by *he, she, it, they, &c.* This is to be understood when they stand before an affirmation, as *I write, thou writest, he writeth*, but in compound sentences, and after affirmations they are changed into *me, thee, him, &c.* as, *I can prove this horse belongs to me, thee, &c.*

All qualities in English are the same in both numbers, as *a good man, ten good men, &c.* and unless some name be joined with it, to determine what quality it is to be understood of, it can never make the sense complete ; as, *good, bad, &c.* have no meaning till applied ; as *a good boy, a bad horse, &c.*

When two names are compounded into one word, the first becomes a quality, as, *sea-fish, gold-cup, &c.*

My, Thy, Her, Our, Your, Their, are called *personal possessives*, and are only used when they are joined with names, as, *This is my horse, My coat, My book, &c.*

but when the sense is not expressed immediately, but understood, or a question is asked, they are changed into Mine, Thine, Hers, Yours, Theirs ; as, This knife is mine ; that is, This is my knife ; Whose knife is this ? Mine, or, It is my knife, &c.

To qualities belong also increase or diminution of the value, goodness or virtue of the names to which they are joined ; and these are generally formed by adding *er* and *est* to the plain simple word itself ; as Fair, Fairer, Fairest ; though sometimes they are made by adding More or Most to the simple word, as Fairer or More fair, Fairest or Most fair : reading and observation will quickly teach any person where to introduce those in the most advantageous place. These four following are irregulars ; Good, Better, Best ; Bad or Ill, Worse, worst ; Little, Less, Least : Much, More, Most.

Instead of the various terminations and declensions of the other languages, the English use *a* or *the*, *of*, *to*, *by*, *from* or *with*, &c. to distinguish the several circumstances of the Name both when it is alone, and also when it is joined with the Quality in both numbers : as,

Singular number.

Plural number.

<i>A or the man</i>	<i>The men</i>
<i>Of a or the man</i>	<i>Of the men</i>
<i>To a or the man</i>	<i>To the men</i>
<i>By from or with a or the man</i>	<i>By, from or with the men</i>

Singular,

Plural.

<i>A or the good horse, &c</i>	<i>The good horses, &c.</i>
<i>Of a or the good horse, &c.</i>	<i>Of the good horses, &c.</i>

We have already taken notice that the third class of words, is the affirmation and what its office is ; we shall only here observe, that it has *two numbers, time*, and *person* belonging to it, by which the being, action, or passion of the subject or name is declared or affirmed ; for the expressing the true state of the time, there is what are usually called *auxiliaries*, from or by which the times of other affirmations are expressed, there being only the *present* and the *passing time* naturally arising from the different endings of the words themselves ; that is, the

present and the passing, or past time, as *love* the present, and *lov'd* or *loved* the passing time. The present time, or the instant in which any thing is actually performing, &c. is distinguished by the words *do*, *dest*, or *doth*, for the singular number; and *do* only for the plural, with the proper personal signs, *I*, *thou*, *he*, *we*, *ye*, *they*, &c. The passing time is an imperfect manner of expressing, and intimates so much, having the sign *did*, or the termination *ed*: the past time shews the action complete, by affirming something with the sign *have*; there is also what is called the *preterpluperfect tense*, and has the sign *had* affixed to it, the other is the *future tense* that affirms something *shall* or *will* be hereafter. And tho' there are really but three proper distinctions of time, *viz.* the present, the past, and the future, yet as our language, as well as others, hath various terminations, or manners of expression, we shall insert them: as to the distinctions of what is commonly called *moods*, it is undeniably certain that they may be denominated as variously, and be as numerous as the particular circumstances require.

As what is called the *potential* and *subjunctive moods*, are an undeniable proof of differing only by some accidental signs; for which reason they are not here enumerated, but called the 1st, 2^d, 3^d, and 4th mood. The first declaring or making some positive assertion about, or relating to the subject, or name. The second having only one tense and five persons, and is employed wholly about commanding or ordaining, praying or permitting something to be done without any specification of time. The third may be variously circumstanced, according as it has its expletives adjoining. And the fourth expresses the action barely and indefinitely as to time. The two auxiliaries supply all others, with those tenses or times which they naturally have no proper termination or distinction for, *viz.* *to have*, by whose assistance all actives are formed, or such as import doing something; and *be*, from which all passives are formed, that is, such as import suffering or bearing something done to the subject.

A Compendious English Grammar.

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The first or indicative mood.

Present tense.		Present tense.	
Singular.		Plural.	
<i>I</i> —have		<i>We</i> —have	
<i>Thou</i> —hast		<i>Ye</i> —have	
<i>He</i> —hath		<i>They</i> —have	
Past tense.		Past tense.	
Singular.		Plural.	
<i>I</i> —had		<i>We</i> —had	
<i>Thou</i> —hadst		<i>Ye</i> —had	
<i>He</i> —had		<i>They</i> —had	
Future tense.		Future tense.	
Singular.		Plural.	
<i>I</i> shall or will have	<i>We</i>	} shall or will have	
<i>Thou</i> shalt or wilt have	<i>Ye</i>		
<i>He</i> shall or will have	<i>They</i>		

Some make other distinctions of time, but as they are only a coupling of those together, this short essay will not permit the disquisition; such as, *I have had, I had had, &c.*

The second or imperative mood.

Have thou. Let him, her, it have. Let us have. Have ye. Let them have.

The third or subjunctive, potential, &c. mood,

Is always distinguished by adding some sign of wishing power, &c. as *I may or can have; I might, could, should, or ought to have, &c.*

The fourth or infinitive mood,

Is always distinguished by the sign *to*; as, *to have, to love, &c.* from this mood that quality called a *participle*, is formed, importing possession; as *having, being, loving, &c.*

The first or indicative mood.

Present tense.	Present tense.	Past tense.	Past tense.
Singular.	Plural.	Singular.	Plural.
<i>I am</i>	<i>We are</i>	<i>I was</i>	<i>We were</i>
<i>Thou art</i>	<i>Ye are</i>	<i>Thou wast</i>	<i>Ye were</i>
<i>He, she, it is</i>	<i>They are</i>	<i>He was</i>	<i>They were</i>

Future tense.		Future tense.	
Singular.		Plural.	
<i>I shall or will be.</i>	<i>We</i>	} <i>shall or will be.</i>	
<i>Thou shalt or wilt be.</i>	<i>Ye</i>		
<i>He shall or will be.</i>	<i>They</i>		

There are other expressions, called tenses, compounded of *have* and this verb ; as, *I have been*, &c. *I had been*, &c.

The second or imperative mood.

Be thou. Let him, her, it be. Let us be. Be ye. Let them be.

The third or subjunctive, &c. mood.

That I may, can, might, would, could, should or ought to be, &c.

The fourth or infinitive mood.

To be, to have been. Being.

From these all other affirmations regular and irregular are formed and completed, to express every possible circumstance of time, action, or passion : as for example,

First Mood.

I love, I loved, I have loved, I had loved, I shall or will love
We We We We We

Thou lovest or dost love | *Thou lovedst or didst love*

Ye love or do love | *Ye loved or did love*

Thou hast loved | *Thou hadst loved*

Ye have loved | *Ye had loved*

Thou shalt or wilt love

They shall or will love

Second Mood.

Love thou; love he, she, or it, or let him; her, or it love; love we, or let us love; love ye, love they, or let them love.

Third Mood.

I, thou, he, she, &c. may, can, might, could, &c. love.

Fourth Mood.

To love, loving, &c.

From what has been said, it is observable, that the natural formations are made successively, thus : first, *something is affirmed by the first person singular; as I love,*

then I
afterw
that
and 3
bear,
have b
I bind
have b
bring,
born,
catch,
chose,
clove,
crept;
dealt;
I drea
drove
fell, a
fetch
I fly,
got, h
go, w
grow
hide,
know
I leav
lie, h
mean
have
I ride
risen
seen;
have
I (shri
day,
sung
speak
or sp
did,
I fow
I stri
swor

then I loved, or did love, then I have or had loved ; and afterwards shall or will love. But there are some verbs that are irregular, and instead of ending in *ed*, in the *2d* and *3d* tenses have particular endings of their own ; as, I bear, bore, have born ; I beat, have beaten ; I begin, have begun ; I behold, have beheld ; I bend, have bent ; I bind, have bound ; I bite, have bitten ; I blow, blew, have blown ; I bleed, have bled ; I breed, have bred ; I bring, have brought ; I break, broke, have broken ; I am born, was born, have been born ; I buy, have bought ; I catch, have caught ; I chide, chid, have chidden ; I chuse, chose, have chosen ; I come, came, am come ; I cleave, clove, have cloven ; I cut, have cut ; I creep, crepe or crept, have crept ; I crow, crew ; I dare, durst ; I deal, dealt ; I do, did, have done ; I draw, drew, have drawn ; I dream, dreamt ; I drink, drank, have drunk ; I drive, drove, have driven ; I do eat, did eat, have eaten ; I fall, fell, am fallen ; I feed, fed ; I feel, felt ; I do fetch, did fetch ; I fight, have fought ; I find, found ; I fling, flung ; I fly, flew, am flown ; I fly, fled, am fled ; I forget, forgot, have forgotten ; I get, got ; I gave, have given ; I go, went, am gone ; I grind, ground ; I grew, grow, am grown ; I hang, hung, have hanged ; I hear, heard ; I hide, hid, have hidden ; I hold, held ; I keep, kept ; I know, knew, have known ; I lead, led ; I learn, learnt ; I leave, left ; I lend, lent ; I do let, did let, have let ; I lie, have lain ; I lye, lyed ; I lose, lost ; I make, made ; I mean, meant ; I meet, met ; I miss, mist or missed ; I owe, have owed ; I do, did, have put ; I do, did, have read ; I ride, rid, have ridden ; I ring, rung ; I rise, rose, am risen ; I do, did, have run ; I say, said ; I see, saw, have seen ; I seek, sought ; I sell, sold ; I send, sent ; I do, did, have shed ; I shine, shone ; I shoe, shod, I shoot, shot ; I shrink, shrunk ; I sing, sang or sung, I sit, sat or fate ; I slay, slew, have slain ; I sleep, slept ; I slide, slid ; I sling, slung ; I smell, smelt ; I smite, smote, have smitten ; I speak, spoke, have spoken ; I spend, spent ; I spill, spilled or spilt ; I spin, spun ; I spit, have spit or spitten ; I do, did, or have spread ; I spring, or sprung ; I spit or spat ; I sow, sowed, have sown ; I stand, stood ; I stink, stunk ; I strike, struck, have stricken ; I string, strung ; I swear, swore, have sworn ; I do or did sweat, have sweated ;

swEEP, swEPt; I swIm, swAm, hAvE swUm; I tAkE, tOok, hAvE tAkEn; I tEAcH, tAuGht; I tEAr, tOre, hAvE tOrN; I tElL, tOlD; I tHInK, tHouGht; I tHrIvE, tHroV, hAvE tHrIvEn; I tHrOw, tHrEw, hAvE tHrOwN; I tRAd, tRAd, hAvE tRAdDEn; I UnDErStAnd, UnDErStOod; I wEAvE, wOvE, hAvE wEAvEd; I wEeP, wEPt; I wIn, wOn; I Am, wAs, hAvE bEEn wIllIng; I wOrK, wRouGht; I wRIng, wRung; I wRItE, wRote, hAvE wRItEn.

The fourth part is here universally called *particles*, under which denomination, all those small words that tie or unite the others together, or that express the modes or manners of words are signified, and which usually, by the common grammarians, are called *adverbs*, *conjunctions*, *prepositions*, and *interjections*. From the due use and connexion of these four parts, are formed sentences; and from a number or multitude of sentences, arise regular discourses, speeches, &c. A sentence consists of three words at least, by which some idea of the mind is expressed; as *lying is hateful*. And this is called a simple sentence, wherein the name or thing is expressed but once, and something is affirmed of that subject: first, its being, and next its mode of being, or else some action of the subject passes upon another, or at least is understood so to do. All others are compounded, wherein either the same subject or name is repeated, or different ones affirmed something of, &c. The name ordinarily is placed before the affirmation and is always really expressed or understood so to be; as, *John loves Mary*. And here it must always be observed, that the same number and person, that the name whose action or passion is intended or expressed by the affirmation is, the same must the affirmation itself be: as in the example above, the name *John*, is the third person singular, and so is the affirmation *loves*: and in the following sentence, *men love your wives*; the name *men* is the second person plural, so is the affirmation. *We admire learning*: here *we* is the first person plural and *admire*, is so also: which is to be observed of all others.



DIRECTIONS

FOR

WRITING.

I Shall endeavour to make this performance useful to those who desire to write well for common business; as also to such teachers who want to be instructed in the first principles of the art of writing. And therefore I shall not trouble you with a long, unnecessary account of the dependence of all the letters in the several alphabets upon one another, that being easily discovered (so far as is material) by any one who knows but the fundamental letters of each hand, which I shall only mention, and leave the rest to your own observation.

The several sorts of hands now in use among us, may be divided into two branches, viz. those of absolute use for business, and those which are only ornamental. Those of absolute use may be reckoned six, the roundhand and Italian, in which most of the common affairs of trade, and the ordinary business of life, are written by all Europeans; the engrossing, square text, court, and chancery hands, in which all the various business of the law is generally transacted; and recorded. The other hands, viz. the old English, the Roman and Italian prints, the German text, &c. are only made use of by way of ornament, or for curiosity in some particular cases, and therefore the writing of them is not esteemed of such necessity to those who are intended for common business.

The principal things to be aimed at in order to write any hand well, are those two; first, To get an exact no-

tion or idea of a good letter, which may be done by a frequent and nice observation of a correct copy; the other is, To get such a command of hand, as to be able to express, with the pen, that idea upon the paper, which is attained by constant and careful practice after good examples; the learner being first informed of the most necessary things to be observed in his practice of that hand he intends to be master of. I shall therefore,

I. Mention some things to be generally observed in writing.

II. Give some directions for holding the pen.

III. Shew the nature of the pen, with particular rules and proportions for writing each hand.

And, fourth, Lay down some proper directions for young persons, when they first enter upon business, in order to bring them to write a good hand with expedition, and to make them place figures after the most beautiful and practical manner.

I. The essential properties of a good piece of writing are, a due proportion of the characters throughout the whole; a just distance between the letters themselves, as well as the words; with a natural leaning or inclination of the letters one to another: a clean, smooth stroke, performed with a masterly boldness and freedom, without which, the most regular piece is like a dead corps, whose features, tho' they may be exact in symmetry, yet want that spirit which only can render it an object both valuable and delightful.

The proportion of the several letters in most hands, is generally regulated by the *o* and *n*, therefore let the making of them be first carefully practised, and then the other letters which come from them, all which must be of the same width and fulness of strokes as they are of.

The proportion and shape of the letters in any hand, ought to be the same, whether they are written in a large or small size; therefore, let every hand be first learned in a large character, which will not only sooner fix the idea of a good letter in your mind, but also give you a greater freedom, and in a shorter time, than writing of the small will. It is certain, that the lesser is always contained in

The greater ; and he that attains to write any hand large, may soon write it as small as he pleases.

Let all strokes, which are the constituent parts of a letter; or, (as some call them) the body-strokes, be made with the full pen, and of the same thickness one with another as near as is consistent with the nature of the hand you are writing.

Let all the strokes which join the constituent parts of letters, or the letters themselves together, be made with the corner of the pen, and as fine as the hand will admit of; which strokes must always have some proportion to the body-strokes, and must be thicker, or thinner, according as the character is lesser, or greater: turn not your pen, neither alter the position of your hand, but let it move with a steady, easy motion, and perform every letter without catchings, and convulsive flutterings.

Let the fine strokes answer one another, in a kind of opposition, and in many hands run parallel.

Let all the letters which have not stems above or below the line, be even at top and bottom. Let those which have stems above the other letters be equal in length to *i*, except *t*, and a few other letters in some hands. Let those which have stems below the line, be equal in length to the *j*, some few excepted, which may be seen by the alphabets of the several hands in the examples.

Let the capital letters be equal in height to the little *i*, and a small matter stronger.

Let the distance between words be double to that between letters.

Let the lines be of such a distance that the stems of the letters may not interfere one with another; to prevent which they must be at least twice the length of an *i* asunder.

II. The next thing is, directions for holding the pen, and sitting to write.

Hold your pen between the two fore-fingers, extended almost straight, and the thumb bending a little outward, and in your right hand, with the hollow side of the pen downwards, and the nib flat upon the paper; let it rest between the two upper joints of the fore-finger, and upon the end of the middle one, about an inch from the nib of the pen, the ends of the little finger, and that which is

next to it, bend in towards the palm of the hand, about half an inch distant from the end of the middle finger.

Let the book or paper ly directly before you, and your hand rest only on the top of your little finger; let no other part of your hand or wrist touch the paper or desk; rest your arm very lightly between the wrist and elbow. Keep your body upright, and from touching the desk; let your elbow be almost close to your side, and the pen pointed towards the outer part of your left shoulder; so that a line being drawn from the inner part of the arm, at the bend of the elbow to the nib of the pen, will be nearly at right angles with the line you are writing upon. And for the slope hands, turn your left side a little towards the desk; but the upright ones, let the body be directly before it, and the right elbow turned outwards from your side: so that a right line being drawn from the inner bend of the elbow to the nib of the pen, will make an angle, near 45 degrees with the line you are writing upon. Let the weight of your body rest upon your left arm, and the paper be kept down with your left hand.

Take care of pressing hard upon your pen in writing any hand.

III. As to the nature of the pen, and the particular rules and proportions for writing each hand, though they might be swelled up to a very great number, by enlarging upon every critical nicety, yet I shall deliver only such, as, in my judgment, are most necessary, most beautiful, and most applicable to expeditious practice.

Make the nib of your pen for the round and round text hands, the breadth of the full stroke, and that part lying next the hand somewhat shorter and narrower.

For the Italian hand make the nib somewhat finer, and the slit longer.

Note, in writing, where figures are intermixed, they must always slope.

Your figures likewise must be larger than your writing.

When your figures are ranged in columns, make them upright.

To make a PEN.

TAKE the first, second, or third quills in the wing of a goose or raven (those that are round, clip and clean are the best :) when you have scrap'd off the thin rind thereof, with the back-edge of your pen-knife, hold it in your left hand with the feather end from you, then enter the back thereof sloping, and cut off as much in length, as the quill is in breadth, and answer that with another cut on the inside, like an opposite to the former; then turn the quill, and enter the edge of your pen-knife even in the back thereof, and exactly in the midst of the half round, neither inclining the blade one way or other, that the slit may not be made awry. Then put in the peg of your knife haft, if it has one for that purpose, or the end of a whole quill, and with a sudden twitch, force up the slit, holding your left hand thumb hard upon the back of the quill, to put a stop how far the slit shall go. This being done, enter your knife sloping in the other side above the slit, about twice the breadth of the quill, and cut away the cradle-piece; then turn the back upwards, and cut down to the end of the slit, the cheek or shoulder-pieces; and in so doing, turn the knife on both sides towards the back. After this, place the inside of the end or nib of the pen, upon the nail of your left hand thumb, holding the quill fast between the fore-finger and middle finger of that hand. Lastly, to finish the nib, enter the edge of the knife on the back, and near the end thereof sloping, and immediately turning the edge almost downright, cut it off.

There are four considerations belonging to the quill.

If the quill be too hard, steep it a while in water.

If it be too soft, harden it with embers.

If it be too thick, pare a small quantity from the back of the nib.

If it be too thin and weak, strengthen the pen with a short slit, a short nib, and broad shoulder.

Best BLACK INK.

TO six quarts of rain or river water (but rain water is the best) put one pound and a half of fresh blue galls of Aleppo (for those of Smyrna are not strong enough) bruised pretty small, eight ounces of copperas, clean, rocky and green, eight ounces of clean, bright and clear gum arabic, and two ounces of roch allum: let these stand together in a large stone bottle, or clean stone pot, or earthen pot, with a narrow mouth to keep it free from dust, shake, rowl, and stir it well once every day, and you will have fine ink in about a month's time, and the older it grows, the better it will be for use

Ingredients for a Quart.

One quart of water, four ounces of galls, two ounces of copperas, and two ounces of gum, mixed and stirred as above.

LONDON INK POWDER.

TAKE ten ounces of the clearest nut-galls, bruise them, and sift the powder very fine, then add white copperas two ounces, Roman vitriol three ounces, gum arabick or sandarack an ounce, bruise and sift them very fine, so that tho' they appear white, a little being put into water, will in a little time turn it, and an ounce of powder will make a pint of very black ink.

JAPAN or SHINING INK.

TAKE gum arabick and Roman vitriol, of each an ounce, galls well bruised a pound, put them into rape vinegar, or vinegar made of clear small beer; let them remain in a warm place, often stirring, till the liquor becomes black, then add to a gallon, an ounce of ivory black, and a quarter of a pint of seed lac-varnish, and it will be a curious black shining ink.

A Powder Ink to rub on paper, and write on.

BRUISE about twenty nut galls, and half an ounce of Roman vitriol, as much gum arabic and gum sandarack, mingle these finely together, when well bruised and sifted to powder, rub the paper hard with it with cotton wool, and polishing it with a piece of ivory, write with water, and in a little time the letters you write will appear a fair black, as if written with the best ink.

To make RED INK.

TAKE three pints of stale beer (rather than vinegar) and four ounces of ground brazile wood, simmer them together for an hour, then put in four ounces of roch allum, and these three are to simmer together for half an hour, and then strain it through a flannel, and bottle it up, well stopped, for use.

To keep INK from freezing or moulding.

IN hard frosty weather, ink will be apt to freeze; which, if once it doth, it will be good for nothing; for it takes away all its blackness and beauty: to prevent which, if you have not the conveniency of keeping it warm, or from the cold, put a few drops of brandy, or other spirits, into it, and it will not freeze. And to hinder its moulding, put a little salt therein.



COPIES for WRITING.

Single COPIES in prose, in an alphabetical order.

A

A Wise man's anger is of short continuance
 Accustom your children to a true notion of things
 Adversity is the touchstone of friendship
 Approve not of that man who commends all you say
 A flattering companion is a dangerous enemy

B. 3.

A wise man governs with ease, and is obey'd with pleasure

A covetous man is always in want

Add to your faith, virtue, and to virtue, knowledge

A prudent man values content more than riches

A virtuous mind is rather to be chosen than promotion

Authority is the main point in government

Abstain from all appearance of evil

A merry heart maketh a cheerful countenance

Anger resteth in the bosom of fools

A soft answer turneth away wrath

Adversity makes a man wise, rather than riches

Advice comes too late when a thing is done

B

BE more afraid of secret sins, than open shame

Brave spirits promote the public good

Be patient in adversity, and humble in prosperity

Beauty without virtue is like a painted sepulchre

Be less confident and more diligent

By learning to obey, you shall know how to command

Brave men will do nothing unbecoming themselves

By diligence and industry we come to preferment

Buy thou the truth, and sell it not.

C

CONTENTMENT makes a man happy without a fortune

Children require instruction as well as provision

Commit not that to another, that you can do yourself

Custom in infancy, becomes nature in old age

Chide him not too much, who confesses his fault

Courtesy and humility are marks of gentility

Confession of a fault makes half amends for it

Contentment is preferable to riches and honour

Consider the shortness of life, and certainty of death

Competency with content is a great happiness.

D

DEATH destroys not the soul, but an ill life does

Delight in what you undertake to learn

Drinking is the drowning of cares, not the cure of them

Do unto others as you would have them do unto you.
 Death will comfortably end a well spent life
 Devise not evil against thy neighbour
 Do not render evil for evil unto any man
 Drunkenness reveals what soberness conceals
 Do not govern your life by fancy, but by reason
 Delay in many cases is dangerous

E

EVERY delay of repentance is a cheat upon ourselves

Education is that which maketh the man
 Every prudent man dealeth with knowledge
 Exalt wisdom, and she shall promote thee
 Ease and honour are seldom bed-fellows
 Evil company makes the good bad, and the bad worse
 Every idle thought to judgment must be brought

F

FORSAKE the foolish, and go in the way of understanding

Follow the dictates of reason, and you are safe
 Forget not God in your mirth, nor yourself in your anger

First learn to obey, before you pretend to govern
 Feed your body as your slave, not as your master
 Fools make a mock at sin
 Few do good with what they have gotten ill
 Future events must be left to providence
 Frugality and industry are the hands of fortune.

G

GIVE God the first and last of each day's thought
 Grieve not for those things which are out of your power

Great sins require great repentance
 Good education is the foundation of man's happiness
 Give as cheerfully as you receive
 God often corrects us in this life to save us in the next
 God is our refuge, a very prudent help in trouble
 Good manners, grace and truth are ornaments in youth
 Greater profit doth always come of learning than of play

Good men are safe when wicked men are at odds.

H

HE that will not work should not eat
 Happiness is desired by all, but obtained by few
 He is in some degree wise that conceals his ignorance
 He that begins well has done half the work
 Hear both parties before you give judgment
 He that boasts in his sins glories in his shame
 He never wants comfort that has content
 Hear, ye children, the instruction of a father
 Hear instruction; be wise, and refuse it not
 He that sins against conscience; sins with a witness
 He that swims in sin must sink in sorrow.

I

IF riches encrease, set not your heart upon them
 In prosperity prepare for adversity
 Idleness has no advocate, but many friends
 It requires as much care to keep, as to get an estate
 Industry keeps the mind clear, and the body healthy
 In the multitude of counsellors there is safety
 Industry is fortune's right hand, and frugality her left
 Instruction and a good education is a durable portion
 It is good to have a friend, but bad to need him.

K

KEEP back thy servant from presumptuous sins
 Knowledge is the treasure of the mind
 Know when to speak and when to hold your tongue
 Keep company with those who may make you better
 Keep thy tongue a prisoner, that thy body may go free
 Knowledge puffs up some men and humbles others
 Keep thy tongue from evil, and thy lips from guile
 Keep good company, and you shall be of that number
 Keep a close mouth, if you would have a wise head
 Keep at a distance from ill company
 Kings may win crowns, but cannot conquer death.

L

LEARNING is the ornament of youth, and comfort
 of age

Lament not the loss of that which ye cannot retrieve
 Lying lips are an abomination to the Lord
 Let another man praise thee, and not thy own mouth
 Love not sleep, lest thou come to poverty
 Life without a friend, is death with a witness
 Learn to live as ye would wish to die
 Liberty is grateful to all but destructive to many
 Let not the work of the day be put off till to-morrow

M

MERCY and truth shall follow them who devise
 good

Man has much to learn, but a short while to live
 Malice seldom wants a mark to shoot at
 Make provision for want in time of plenty
 My son, if sinners entice thee, consent thou not
 My son, gather instruction from thy youth up
 Many know good, but do not the good they know
 Many live beggars all their life, that they may not die so
 Many are led by the ears more than by the understand-
 ing
 Many are made saints on earth, that never reach heaven
 Mend your manners, and that will mend your fortune

N

NCESSITY is commonly the mother of invention
 No torments are so great, but patience may van-
 quish

Nothing is more contagious than an ill example
 Not to grow better is commonly to grow worse
 No man hath seen God at any time
 None should covet what cannot possibly be had
 Nothing is constant in this uncertain world
 Nothing is so hard, but diligence may overcome
 Nature seldom changes with the climate

O

OUR life here is but a journey to the next world.
 Of all prodigality, that of time is worst
 One vice is more expensive than ten virtues
 One fault cannot justify the commission of another
 One bad companion may ruin many good men

Of all poverty, that of the mind is most deplorable
 Of all things, death should never be forgot
 Only by pride cometh contention
 Once well done is twice done
 On present time depends our future fate
 Other peoples deaths should be momento's to our own

P

PROVIDENCE consults our wants, not wantonness
 Prosperity gains friends, and adversity tries them
 Passion is a bad counsellor, and as ill a speaker
 Pride, like a wild horse, overthrows his rider
 Pursue useful and profitable studies
 Poverty and shame attend those that refuse instruction
 Provide against the worst, and hope for the best
 Poor men want many things, but covetous men all
 Put not off the main business of life to the very article
 of death
 Poor freedom is better than rich slavery.

Q

QUENCH not the spirit, pray without ceasing
 Quick at meat, quick at work
 Quench not your desires when they tend to good
 Quick promisers are slow performers
 Quietness and content are mates most excellent
 Quiet men have quiet minds, and enjoy content
 Quarrellsome persons sometimes meet with their match.

R

REPENTANCE is the physic of the soul
 Remember not the sins of my youth
 Religion is the best understood when most practised
 Revenge not injuries, but forgive them
 Reality is now become a great rarity
 Riches profit not in the day of wrath
 Remember thy Creator in the days of thy youth
 Remember your duty to God, your neighbour, and
 yourself
 Repent to day, to-morrow may be too late.

S

SHAME and disgrace shall be the portion of fools
 Sin goes before, and shame certainly follows after
 Silence is an antidote against an envious tongue
 Saying and doing should be but one man's office
 Shew me a liar, and I will shew you a thief
 Sin and sorrow are inseparable companions
 Soft words sometimes work upon the proudest hearts

T

THERE are none so poor as those whom God hates
 The hope of reward sweetens labour
 To praise yourself is the way to be dispraised
 The power of example prevails more than precept
 Truth is ashamed of nothing but to be hid
 The greatest talkers are always the least doers
 The worth of a thing is best known by the want of it
 Those who wo'nt mend to-day, shall have more work
 to-morrow
 The doing nothing is very near doing evil
 To do good is the way to find it
 Time and tide will for no man stay

U

USE soft words and hard arguments
 Unlawful love ends generally in bitterness
 Unto the upright there rises light in darkness
 Undertake deliberately, and execute vigorously
 Unsanctified prosperity is the bane of virtue
 Unto thee will I cry, O Lord, be not silent to me
 Unwillingly go to law, and willingly make an end.

V

VIRTUE is commended of all, but followed by few
 Value not yourself by another man's opinion
 Virtue often suffers, when vice goes unpunished
 Valour can do little without discretion
 Virtue to noblest acts the mind inclines
 Variety is the beauty of the world
 Virtue is first to be sought and money next.

W

WISE men keep their expences short of their income
 Whatever is forbidden in act is also in thought
 Wicked practices discover bad principles
 Would you be wise, endeavour to be good
 Wisdom to the mind is like health to the body
 We must not blame fortune for our own faults
 Would you be rich, be industrious; if wise, be studious
 Where there is no fault, there needs no pardon
 When passion rides then give reason the reins

X

XERXES wept at the thoughts that his vast army
 would be dead in 100 years
 Xenophon accounted the wise man happy
 Xenophon was a learned general
 Xerxes whipt the sea, because it would not obey his
 command
 Xerxes wept at the changeable state of man.

Y

YOUNG men see that you honour the aged
 Youth is full of disorder and age of infirmity.
 You may know men by the company they keep
 Young men go to death, but death goes to old men
 Young men in strength should provide against age and
 weakness
 Your vice, and not your poverty, is your shame
 You must crack the shell before you can have the ker-
 nel
 Yield quietly to what must come unavoidably.

Z

ZEALOUSLY strive for an eternal crown
 Zeal grounded on knowledge enlivens devotion
 Zeal for religion cannot warrant revenge
 Zeal in a good cause, commands applause
 Zeal without knowledge is but religious wild-fire
 Zeal, if not rightly directed, is very pernicious.

AS you expect that men should deal by you,
So deal by them, and give each man his due.
Better it is to gain great reputation,
Than heap up wealth with trouble and vexation.
Constraint in all things makes the pleasure less:
Sweet is the love that comes with willingness.
Despair of nothing that you would attain:
Unweary'd diligence your point will gain.
Experience best is gain'd without much cost:
Read men and books; then practise what thou know'st.
Fortune may sometimes prove true virtue's foe,
But cannot work her utter overthrow.
Greatness in virtue only's understood:
None's truly great, that is not truly good.
Honour's a god that none but fools adore:
The wise have nobler happiness in store.
If all mankind would live in mutual love,
This world would much resemble that above.
Kingdoms, like private persons, have their fate,
Sometimes in high, sometimes in low estate.
Let each man follow close his proper trade,
And all affairs will soon be better made.
Men's fancies vary strangely, like their faces,
What one commends, another man disgraces.
Number itself is at a loss to guess
Th' endurance of our future happiness.
Oh! that the sons of men would once be wise,
And learn eternal happiness to prize!
Pray thou to God, that he may be inclin'd
To grant thee health of body and of mind.
Quarrelsome brawling, gaming, fuddling, shun:
Thrice happy they, that ne'er such courses run.
Remember, time will come, when we must give
Account to God, how we on earth do live.
Some men get riches, yet are always poor;
Some get no riches, yet have all things store.
They that are proud, and other men disdain,
Do often meet with scorn and hate again.
Virtue is prais'd but little practis'd by us:
So loose the age, that few are truly pious.
What's human life? a day, a race, a span,
A point, a bubble, froth: so vain is man.

Xenophilus did well in health abide
One hundred seven years, and then he dy'd.

Young men, take pains, be brisk, and I'll engage,
Your youthful pains will pleasure yield in age.

Zaleucus made his laws so strict, that those,
Who acted whoredom, both their eyes should lose.



Of the POINTS or STOPS, and other MARKS used in
writing and reading; with their characters, places,
and significations.

THE stops are used to shew what distance of time
must be observed in reading: and they are so ab-
solutely necessary to the better understanding of what
we write, and read, that without a strict attention to
them, all writing would be confused, and liable to many
misconstructions.

Stops, considered as intervals in reading, are but four,
viz. comma, semicolon, colon, and period, or full stop:
and these bear a kind of musical proportion of time one
to another: for a comma stops the reader's voice, while
he may privately, with deliberation, tell one: the semi-
colon, two; the colon, three; and the period, four.

Their characters are thus,

Comma (,) a circular dash at the foot of a word.

Semicolon (;) a point over the comma.

Colon (:) two points.

Period (.) a single point at the foot of a word.

But if a question be asked, there's a circular stroke
upon a short line put over the period, and 'tis called an
interrogation, thus (?).

If a sudden wondering be expressed, then a straight
line is placed over the period, and 'tis called a note of
admiration, thus (!).

If one sentence be enclosed within another, of which
it is no part, then 'tis put between two large half circles

called parenthesis, thus (), and, in reading, this doth something lower the tone of the voice, as a thing, that comes in by the bye, interrupting the main coherence of the period, and restraining it from being taken in so large a sense as it might otherwise bear. Each part of it is equal in time to a comma.

These that follow, are the most usual marks in writing.

Accent (') being placed over a vowel, denotes, that the tone, or stress of the voice in pronouncing, is upon that syllable.

Apostrophe (') a comma at the head of letters, denotes some letter, or letters, left out for quicker pronunciation, as I'll, for I will; wou'd'st, for would'st; sha'n't, for shall not; ne'er, for never,

Afterism (*) a star, guides to some remark in the margin, or at the foot of the page. Several of them set together signify, that there is something wanting, defective, or immodest in that passage of the author.

Breve (~) is a crooked mark over a vowel, and denotes that it is sounded quick or short.

Caret (^) is placed underneath the line, and denotes that some letter, word, or sentence is left out by mistake, and must be taken in exactly where it points.

Circumflex (^) is in the same shape as caret, but is always placed over some vowel of a word, to denote a long syllable.

Dieresis (¨) is two points placed over two vowels of a word, that would otherways make a diphthong, and parts them into two several syllables.

Hyphen (-) is a straight mark a cross, which, being set at the end of the line, denotes that the syllables of a word are parted, and that the remainder of it is at the beginning of the next line.

Here note; that whenever a word is thus parted, the syllables must be carefully separated by the rules of spelling.

'Tis used also to join, or compound, two words into one; as, Ale-house, Inn-keeper.

Being placed over a vowel it is not then properly called a Hyphen, but a Dash, which in writing signifies the omission of m or n; as, Nothing is more comen-

dable than fair writing; for, Nothing is more commendable than fair writing.

Index (☞) the forefinger pointing, signifies that passage to be very remarkable, against which it is placed.

Obelisk (†) is used as well as the asterisk *, to refer the reader to the margin. In dictionaries it commonly denotes a word to be obsolete, or less in use.

Paragraph (§) or division, comprehends several sentences under one head, or subject.

Parenthesis [] or brackets, include words or sentences of the same value and signification with those they are joined to, which may be used in their stead.

Quotation (") or a double comma reverse, at the beginning of a line, shews a passage quoted out of an author in his own words.

Section (§) or division, is used in subdividing of a chapter, or book, into lesser parts or portions.



ABBREVIATIONS.

Abbreviations are very necessary for dispatch of business. For by them, we expeditiously express, or set down a long word, shortening it, by making some initial letter, or letters, belonging to the word, to express it; as in the Table following.

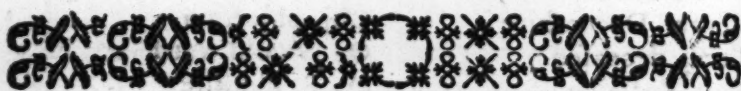
A. B. Artium baccalaureus, or batchelor of arts	Ap. apostle
Abp. archbishop	Adml. admiral
Acct. account	Agt. against
A. D. Anno Domini, or the year of our Lord	Amot. amount
A. M. Anno mundi, or the year of the world	Aug. August
Adms. administrators	A. R. Anno regni, or in the year of the reign
A. M. Artium magister, or master of arts	B. A. batchelor of arts
Ana. of each a like quantity	B. D. batchelor of divinity
	B. V. blessed Virgin
	Bart. baronet
	Bp. bishop

ABBREVIATIONS.

29

Ch. chapter	Knt. knight
Cant. Canterbury	L. libræ, or pounds
Cent. centum, or hundred	Lieut. lieutenant
Chan. chancellor	L. L. D. legum doctor, or doctor of laws
Chap. chapter	Mar. March
Capt. captain	M. A. master of arts
Cl. clericus, or clerk	Maj. Majesty
Co. company	Monf. monsieur
Col. Colossians, colonel	Mr. master
Comrs. commissioners	Mrs. mistress
Con. Constance	M. D. medicine doctor, or doctor of physic
Cr. creditor	M. S. memoriæ sacrum, or sacred to the memory; also manuscript
C.C.C. corpus Christi col. lege	N. note
C. S. custos sigilli, or the keeper of the seal	N. B. nota bene, note, mark well, or observe
C. P. S. custos privati si- gilli, or keeper of the privy seal	N. S. new stile
Dr. doctor	No. number
D. ditto	n. l. non liquet, or it does not appear.
D. denarii, or pence	Nov. or 9ber, November
Dec. or xber, or 10ber, December	Obj. objection
Devon. Devonshire	O. W. old word
Decd. deceased	O. S. old stile
Doct. doctrine	Oct. or 8ber, October
D. D. doctor of divinity	Oxon. Oxford
E. g. exempli grati, or for example	Pd. paid
Esq; esquire	p. per, or by
Exon. Exeter	per ct. per centum, or by the hundred
Feb. February	Parl. parliament
Gent. gentleman	Philom. philomathes, or lo- ver of learning
Hund. hundred	Philo-math. philo-mathe- maticus, or a lover of mathematics
i. e. id est, or that is	P. S. postscript
I. H. S. Jesus hominum sal- vator, or Jesus Saviour of men	Q. question
Inst. instant	
Jan. January	
Jno. John	

q. d. quasi dicat, or as if he should say	theologiae professor, or professor or doctor of di- vinity
q. l. quantum libet, or as much as you please	The. Theophilus
q. s. quantum sufficit, or a sufficient quantity	Tho. Thomas
qr. quarter, or farthing	V. verse
Rev. reverend	Viz. videlicet, or to wit, or that is to say
Rob. Robert	Will. or Wm. William
Reg. prof. regus professor	wp. worship
Rt. Hon. right honourable	Xn. christian
S. A. secundum artem, or according to art	Xt. Christ
St. saint	Xtopher. Christopher
Sect. section	ye. the
Sept. or 7ber, September	yn. then
Serj. serjeant	yo. you
Serv. servant	ym. them
Salop. Shropshire	yt. that
Sr. sir	yr. your
ss. semissis, or half a pound	z. zeal
S. S. T. P. sacro-sanctæ	&c. et cetera, or and the rest, or and such like



To write on Paper GOLD LETTERS, called
SHELL GOLD.

LAY a little leaf gold upon a fine earthen plate, and drop thereon a little clear virgin's honey, then work it up with your clean knife's haft, until it is stiff like unto a paste, which put into an oyster-shell, and do it close; when you are to write with it, put a little gum water on the side of the gold, and mix a little thinly fit for your pen.

How to write SECRET LETTERS.

WRite what you would have seen on one side of the paper with common ink, and on the other side with milk, that which you would have secret; and when

you would make the same legible, direct your friend to hold that side, which is written with ink, to the fire, and the milky letters will shew bluish on the other side, and easy to be read.

Another Way.

YOU must write a letter that may carry good sense, to your friend, but let the lines be wide asunder: then between these lines write your secret letter, with gall water only, wherein the galls have been infused but a little time; for if after you have written with it, there be any sensible colour left upon the paper, you must throw away the water, and make new; this being dry, and of one colour with the paper, will give no cause of suspicion; and the rather, because the letter purporteth a sufficient sense already. Now for the discovery of it, you must dissolve some copperas in fair water, and with a fine pencil, dipt in the copperas water, you must moisten the interlining of your letter, and thereby you shall make it legible.

To write both Blue and Red Letters at once, with the same ink and pen, and upon the same paper.

PUT the quantity of a hazel nut of litmose blue to three spoonfuls of conduit water, wherein some gum arabic is dissolved; and when it hath settled the space of an hour, if you write therewith you shall have perfect blue letters: and if you dip a pencil in the juice of lemons, and wet some part of the paper therewith, and afterwards let your paper dry again, and then write upon the place where the juice of the lemon was laid, with your blue ink, the letters will suddenly become red, and in all the rest of the paper, the letters will be blue.



A Poem in praise of the invention of Writing.

Blest be the man! his memory at least,
 Who found the art; thus to unfold his breast;
 And taught succeeding times an easy way,
 Their secret thoughts by letters to convey;
 To baffle absence, and secure delight,
 Which till that time was limited to sight.
 The parting farewell spoke, the last adieu,
 The less'ning distance past, the loss of view,
 The friend was gone which some kind-moments gave,
 And absence separated like the grave.
 When for a wife the youthful patriarch sent,
 The camels, jewels, and the steward went,
 And wealthy equipage, though grave and slow,
 But not a line that might the lover show:
 The ring and bracelets woo'd her hands and arms;
 But had she known of melting words the charms
 That under secret seals in ambush lie,
 To catch the soul, when drawn into the eye,
 The fair Assyrian had not took his guide,
 Nor her soft heart in chains of pearl been ty'd,



LETTERS

On Compliment, Business, and several other
 important Occasions.

I Here present you with a collection of useful letters
 on such subjects as may naturally occur to a young
 man, both before, and at his first setting out in the
 world; which, if read attentively, and copied care-
 fully, will soon correct his orthography, amend his
 manner of writing, and serve him to form a tolerable
 stile.

LETTER I.

From a Father to his son, on his keeping bad company,
bad hours, &c. in his apprenticeship.

Dear Son,

I Am very much concerned to hear, that you are of late fallen into bad company; that you keep bad hours, and give great uneasiness to your master, and break the rules of his family: that when he expostulates with you on this occasion, you return pert and bold answers; and, instead of promising or endeavouring to amend, repeat the offence; and have entered into clubs and societies of young fellows, who set at nought all good example, and make such persons as would do their duty the subject of their ridicule, as persons of narrow minds, and who want the courage to do as they do.

Let me, on this occasion, expostulate with you, and let before you the evil of the way you are in.

In the first place: What can you mean by breaking the rules of a family you had bound yourself by contract to observe? Do you think it is honest, to break thro' engagements into which you have so solemnly entered; and which are no less the rules of the corporation you are to be one day free of, than those of a private family?—Seven years, several of which are elapsed, are not so long a term, but that you may see it determined before you are overfit to be trusted with your own conduct; twenty-one or twenty-two years of age is full early for a young man to be his own master, whatever you may think; and you may surely stay till then, at least, to chuse your own hours, and your own company; and, I fear, as you go on, if you do not mend your ways, your discretion will not then do credit to your choice. Remember, you have no time you can call your own, during the continuance of your contract; and must you abuse your master in a double sense; rob him of his time, especially if any of it be hours of business; rob him of his rest; then break peace in his family, and give a bad example to others? and all for what?

why, to riot in the company of a set of persons, who condemn, as they teach you to do, all order and discipline; who in all likelihood, will lead you into gaming, drinking, swearing, and even more dangerous vices, to the unhinging of your mind from your business, which must be your future support.

Consider, I exhort you, in time, to what these courses may lead you. Consider the affliction you will give to all your friends, by your continuance in them. Lay together the substance of the conversation that passes in the whole evening, with your forthy companions after you are come from them; and reflect what solid truth, what useful lesson, worthy of being inculcated in your future life, that whole evening has afforded you; and consider, whether it is worthy breaking thro' all rule and order for? — Let whether your present conduct is such as you would allow in a servant of your own? whether you are so capable to pursue your business with that ardour and delight next morning, as if you had not drank, or kept bad hours, or ever night? if not whether your master has not a double loss and damage from your mispent evenings? whether the taking of small liberties, as you may think them, leads not on to greater? for, let me tell you, you will not find it in your power to stop when you will; and then, whether any restraint at all will not in time be irksome to you?

I have gone through the like servitude with pleasure and credit. I found myself my own master full soon for my discretion; what you think of yourself I know not; but wish you may do as well for your own interest, and reputation too, as I have done for mine; and I'll assure you, I should not have thought it either creditable or honest to do as you do. I could have stood the laugh of an hundred such vain companions as you chuse, for being too narrow minded to break through all moral obligations to my master, in order to shew the bravery of a bad heart, and what an abandoned mind dared to perpetrate. A bad beginning seldom makes a good ending, and if you were assured that you could stop when you came for yourself, which is very improbable, how will you answer it to equity and good conscience, that you will do so for your master? There is, let me tell you, more true bravery of

and in forbearing to do an injury, than in giving offence.

You are now at an age when you should study to improve, not divert, your faculties. You should now lay in fund of knowledge, that in time, when ripened by experience, may make you a worthy member of the commonwealth. Do you think you have nothing to learn, either as to your business, or as to forming of your mind? Should it not be much better to chuse the silent, the sober conversation of books, than of such companions as never read or think; an author never commits any but his best thoughts to paper; but what can you expect from the laughing, noisy company you keep, but frothy prate, ingested notions, and thoughts so unworthy of being remembered, that it is the greatest kindness to forget them?

Let me intreat you then, my dear son, for your family's sake, or for your own sake, before it be too late, to reflect, as you ought, upon the course you are enter'd into. By applying yourself to books, instead of such vain company, you will be qualified in time for the best of company, and to be respected by all ranks of men. This will keep you out of unnecessary expences, will employ all your leisure time, will exclude a world of temptations, and open and enlarge your notions of men and things, and, finally, set you above that wretched company which now you seem so much delighted with. And one thing let me recommend to you, that you keep a list of the young men of your standing within the compass of your knowledge, and for the next seven years, observe what fate will attend them; see, if those who follow not the course you are so lately entered into, will not appear in a very different light from those who do; and from the industry and prosperity of the one, and the decay or failure of the other (if their vain ways do not blast them before, or as soon as they begin the world) you'll find abundant reason every day to justify the truth of the observations I have thrown together. As nothing but my affection for you could possibly influence me to these expostulations, I hope for a proper effect from them, if you would be thought well of by, or expect any favour from,

Your loving father.

Your master will, at my request, send me word of the success of my remonstrances.

L E T T E R II.

Advice from an uncle to a young beginner, &c.

Dear Thomas,

AS you are now entering into the world, and will probably have considerable dealings in your business, the frequent occasions you will have for advice from others, will make you desirous of singling out among your most intimate acquaintance, one or two whom you would view in the light of friends.

In the choice of these your utmost care and caution will be necessary; for by a little mistake here you can scarcely conceive the fatal effects you may hereafter experience; wherefore it will be proper for you to make judgment of those who are fit to be your advisers, by the conduct they have observed in their own affairs, and the reputation they bear in the world. For he who has by his own indiscretions undone himself is much fitter to be set up for a land mark for a prudent mariner to shun his courses, than an example to follow.

Old age is generally slow and heavy, youth headstrong and precipitate: but there are old men who are full of vivacity, and young men replenished with discretion; which makes me rather point out the conduct than the age of persons with whom you should chuse to associate; tho' after all, it is a never failing good sign to me of prudence and virtue in a young man, when his seniors chuse his company, and he delights in theirs.

Let your endeavours therefore be, at all adventures, to consort yourself with men of sobriety, good sense and virtue; for the proverb is an unerring one, that says, A man is known by the company he keeps. If such men you can single out, while you improve by their conversation you will benefit by their advice: and be sure remember one thing, that tho' you must be frank and unreserved in delivering your sentiments, when occasions offer, yet that you be much readier to hear than speak; for to this

purpose it has been significantly observed, that nature has given a man two ears, and but one tongue. Lay in therefore by observation, and a modest silence, such a store of ideas, that you may, at their time of life, make no worse figure than they do; and endeavour to benefit yourself rather by other peoples ills than your own. How must those young men expose themselves to the contempt and ridicule of their seniors, who, having seen little or nothing of the world, are continually shutting out by open mouths, and closed ears, all possibility of instruction, and making vain the principal end of conversation, which is improvement. A silent young man makes generally a wise old one, and never fails of being respected by the best and most prudent men. When therefore you come among strangers, hear every one speak before you deliver your own sentiments; by this means you will judge of the merit and capacities of your company, and avoid exposing yourself, as I have known many do, by shooting out hasty and inconsiderate bolts, which they would have been glad to recal, when perhaps a silent genius in company has burst out upon them with such observations, as have struck consciousness and shame into the forward speaker, if he has not been quite destitute of inward reproach.

I have thrown together, as they occurred, a few thoughts, which may suffice for the present to shew my care and concern for your welfare. I hope you will constantly, from time to time, communicate to me whatever you shall think worthy of my notice, or in which my advice may be of use to you. For I have no pleasure in this life equal to that which the happiness of my relations gives me. And of this you may be assured; for I am, and ever must be,

Your loving uncle.

LETTER III.

General rules of conversation, &c. From a Clergyman
to a young Tradesman.

Dear Henry,

AS I had not an opportunity of saying so much to you as I wished when you were last here ; I send this to inform you of some things, in your general conversation, which I think would be proper for you to observe and amend ; particularly your excessive itch for talking which discovers itself alike on all occasions. I have always flattered myself, that you do not want sense and am willing to hope I have not been deceived : but the dangerous self-sufficiency of most young men seems violently to have seized you, which, I hope, a little reflection will remove.

The art of rendering yourself agreeable in conversation is worth your serious study ; 'tis an advantage few can boast, tho' sought after by all ; and nothing is so constant an enemy to success in those who would excel in this art, as the harbouring an opinion of their own proficiency, before they have attained to any tolerable degree of knowledge in what they imagine themselves possessed of. Conversation, where it is rightly managed, must be so conducted as to let each member of the company have a share in the pleasure and applause it affords ; if you are six in number, after you have told a story, or made any remark which gives a general satisfaction ; you must consider it the right of another to draw your attention in his turn ; and, unless particularly requested, it betrays a great weakness to follow yourself. No doubt you love to be admired ; and have not others the same passion ? you believe your wit more brilliant than theirs ; are you sure that they are not of the same opinion as to their own ? If a man speaks little, you must not from thence, conclude him willing to give every claim to conversable merit ; perhaps he cannot sing ; but to be sure he is as desirous of having his peculiar humour, or his dry joke, applauded, as you are to be intreated another song. If he is no mathematician

perhaps he is versed in religious disputation; if he des-
 ses plays, he may admire history; tho' he understands
 geography he may yet know how to describe the
 mours of mankind; and tho' he pretends not to poli-
 es, he may have a turn for some more useful science.
 When these are considered, if his modesty is great, you
 cannot oblige him more than by throwing an opportu-
 ny in his way to display his capacity on the subject he
 believes himself most able to handle with advantage;
 or, in order to support a thorough good humour, a man
 must be pleased with himself as well as with others.
 When this is properly taken care of, conversation sel-
 om fails to prove entertaining; and to the neglect of
 is are owing many of the yawning hours spent in com-
 nies composed of men not incapable of behaving a-
 ceably.

The manner of telling a story is also worth your no-
 ce; you have known the pleasure of hearing a long
 e well told; Mr French has an admirable talent in
 is way; but then you must observe that half the plea-
 re he gives, arises from his happily avoiding any of the
 ly digressions, which are the great cause of a story's
 eming tedious; you never hear him mingle his relati-
 with, I remember very well it was the same day that
 ure Worthy's son came of age.—I bought my bay
 g the very day before, at such a fair, being a Friday,
 at year;—or, I can scarce think of it without laugh-
 g;—or, but, however, as I was saying:—and a hun-
 ed more such dead weights to attention. Nor does he
 er praise a story before he relates it; a fatal rock to
 any a good relation, for when a story wants a prepa-
 tory recommendation, it ought not to be told, and e-
 n when the relation is possible, the generality of au-
 tors are apt to persuade themselves,

The mountain labours, and a mouse is born.

These are loose and general hints, yet by a due im-
 vement of them you will find yourself very sensibly
 ow more and more agreeable wherever you converse.
 n easy and becoming freedom you already have, and
 the addition of discretion in your use of them, and

complaisance to others, you will probably succeed in the desire so predominant in you, of being admired by men of sense and judgment. Which will be no small pleasure to, yours, &c.

LETTER IV.

A young man in business, to a father, desiring leave to address his daughter.

S I R,

London, September 24.

I Hope the justness of my intentions will excuse the freedom of these few lines, whereby I am to acquaint you of the great affection and esteem I have for your daughter. I would not, Sir, offer at any indirect address, that should have the least appearance of inconsistency with her duty to you and my honourable views to her; chusing, by your influence, if I may approve myself to you worthy of that honour, to commend myself to her approbation. You are not insensible, Sir, by the credit I have hitherto preserved in the world, of my ability, by God's blessing, to make her happy; and this the rather emboldens me to request the favour of an evening's conversation with you at your first convenience, when I will more fully explain myself, as I earnestly hope, to your satisfaction, and take my encouragement or discouragement from our own mouth. I am, Sir, mean time, with great respect,

Your most obedient and humble servant.

LETTER V.

From a young lady to her father, acquainting him with a proposal of marriage made her.

Honoured Sir,

Canterbury, June 2.

I Think it my duty to acquaint you, that a gentleman of this town, by name Mr Truelove, and by business a linen draper, has made some overtures to my cousin Teltruth, in the way of courtship to me. My cousin has brought him once or twice into my company,

which he could not well decline doing, because he has dealings with him, and has an high opinion of him and his circumstances. He has been set up four years, and has very good business, and lives in credit and fashion. He is about twenty nine years old, and a likely man enough; he seems not to want sense or manners, and is come of a good family. He has broke his mind to me, and boasts how well he can maintain me; but I assure you, Sir, I have given him no encouragement, and told him that I had no thoughts of changing my condition, yet a while; and should never think of it but in obedience to my parents; and I desired him to talk no more on that subject to me. Yet he resolves to persevere, and pretends extraordinary affection and esteem. I would not, Sir, by any means, omit to acquaint you with the beginning of an affair that would be want of duty in me to conceal from you, and shew a guilt and disobedience unworthy of the kind indulgence and affection you have always shewn to,

S I R,

Your most dutiful daughter.

My humble duty to my honoured mother, love to my brothers and sisters; and respects to all friends. Cousin Teltruth, and his wife and sister, desire their kind respects. I cannot speak enough of their civility to me.

L E T T E R VI.

The young gentleman's letter to the father, apprising him of his affection for his daughter.

S I R,

Canterbury, June 12.

I Take the liberty, though personally unknown to you, to declare the great value and affection I have for your worthy daughter, whom I had the honour to see at my good friend Mr Teltruth's. I should think myself intirely unworthy of her favour, and of your approbation, if I could have a thought of influencing her resolution but in obedience to your pleasure; as I should

on such a supposition, offer an injury likewise to the prudence in herself, which I flatter myself, is not the least of her amiable perfections. If I might have the honour of your countenance, Sir, on this occasion, I would open myself and circumstances to you, in that frank and honest manner which should convince you of the sincerity of my affection for your daughter; and at the same time of the honourableness of my intentions. In the mean while I will in general say, that I have been set up in my business, in the linen drapery way, upwards of four years; that I have a very good trade for the time; that I had 2000 /. to begin with, which I have improved to 2500 /. as I am ready to make appear to your satisfaction; that I am descended of a creditable family, have done nothing to stain my character, and that my trade is still farther improvable, as I shall, I hope, enlarge my bottom. This, Sir, I thought but honest and fair to acquaint you with, that you might know something of a person who sues to you for your countenance, and that of your good lady, in an affair that I hope may prove one day the greatest happiness of my life; as it must be if I can be blessed with that, and your dear daughter's approbation. In hope of which, and the favour of a line, I take the liberty to subscribe myself,

Good Sir,

Your most obedient humble servant,

LETTER VII.

From a country chapman beginning trade, to a city dealer, offering his correspondence.

S I R,

Leeds, Oct. 20.

THE time of my apprenticeship with Mr Trusty of this town, being expired, I am just going to begin for myself in Wakefield, having taken a shop there for that purpose. And as I know the satisfaction you always gave to my master in your dealings, I make an offer to you of my correspondence, in expectation that you will use me as well as you have done him, in whatever I may write to you for. And this I the rather ex-

ect, as you cannot disoblige Mr Trusty by it, because of the distance I shall be from him; and I shall endeavour to give you equal content with regard to my payments, &c. Your speedy answer whether or no you are disposed to accept of the offer, will oblige,

Your humble servant.

LETTER VIII.

From a father to a son, to dissuade him from the vice of drinking to excess.

My dear son,

October 3.

IT is with a grief proportioned to my love, which is extreme, that I understand you have of late neglected your studies, and given yourself up to the odious vice of drinking: what shall I say, what shall I do, to engage you to quit this pernicious practice, before it becomes such a habit, that it will be impossible, or at least very difficult for you to cast it off? Let me require, let me intreat you, to give a suitable attention to what I have to say on this head, which I shall offer rather as a warm friend, than an angry father; and as I address myself to your reason, I will leave it to yourself to judge of the truth of the observation I have to make to you.

In the first place, with respect to health, the greatest jewel of this life, it is the most destructive of all vices: vertigoes, asthma's, palsies, gouts, apoplexies, cholics, fevers, consumptions, dropies, stone, and hypocondriac diseases, are naturally introduced by excessive drinking.

All the rest of the vices together, are not so often punished with sudden death as this one: what fatal accidents, what quarrels, what breaches between friend and friend, are owing to it!

Then, in the second place, How does it deface reason, destroy all the tender impulses of nature, make a wise man a fool, and subject persons of the brightest parts to the contempt of the weakest, and even, in time, extinguish those shining qualities which constitute the difference between a man of sense and a blockhead! For, as a certain eminent author very well observes,

fools have generally stronger nerves, and less volatile spirits, than men of fine understanding; that which will rouse the one, will make the other either stupid or frantic, and though it sometimes while the fit continues, strengthens the imagination, yet it always depresses the judgment; and after the fit is over, both those faculties languish together, till, in time, it quenches the imagination, impairs the memory, and drowns the judgment.

Most other vices are compatible, as the same author observes, with several virtues; but drunkenness runs counter to all the duties of life. A great drinker can hardly be either a good husband, a good father, a good son, a good brother, or a good friend: it lays him open to the worst company, and his company frequently subjects him to lewd women, gaming, quarrels, riots, and often murders. All other vices, even, the greatest of vices, as ambition, unchastity, bigotry, avarice, hypocrisy, detest this unnatural and worse than beastly vice; for the beasts themselves, even the uncleanest of them, know nothing of it.

Other vices indeed make men worse, says this judicious author; but this alters men from themselves, to that degree, that they differ not more from their present companions, than from their former selves. A habitude of it will make the prudent inconsiderate, the ambitious indolent, the active idle, and the industrious slothful; so that their affairs are ruined for want of application, or by being intrusted in the hands of those who turn them wholly to their advantage, and, in the end, to the ruin of those who employ them.

I have written a long letter already: yet have I still more to say; which, that I may not tire you, I will leave to another opportunity.

Your most indulgent father.

From

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LETTERS.

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LETTER IX.

From an apprentice to his master, begging forgiveness
for a very great misdemeanor.

Good Sir,

I Am so ashamed of myself for the last occasion I have given you to be angry with me, after my repeated promises of amendment, that I have not the courage to speak to you. I therefore take this method of begging you to forgive what is past; and let this letter testify against me, if ever I wilfully or knowingly offend again for the future. You have children of your own. They may possibly offend; tho' I hope they never will as I have done. Yet, Sir, would you not wish they might meet with pardon, if they should, rather than reprobation?—My making or my ruin, I am sensible, lies in your breast. If you will not forgive me, sad will be the consequence to me, I doubt. If you do, you may save a soul, as well as a body, from misery; and I hope, Sir, you will weigh this with your usual goodness and consideration. What is past I cannot help; but for what is to come, I do promise, if God gives me health and power, that my actions shall testify for me how much I am,

Good Sir,

Your repentant humble servant.

LETTER X.

The master's answer.

Robert,

YOur letter has affected me so much, that I am willing once more to pass over all you have done. Surely at last I may depend on these your solemn assurances, and, as I hope, deep contrition? If not, be it as you say, and let your letter testify against you for your ingrateful baseness; and for me, in my readiness (which however shall be the last time) to forgive one that has

been so much used to promise, and so little to perform.
But yet I hope for better, because I yet wish you well;
being as you use me,

Yours or otherwise.

LETTER XI.

From an apprentice, where the master is too remiss in
his own affairs.

Honoured Sir and Madam,

YOU desire to know how I go on in my business. I
must needs say, very well in the main, for my
master leaves every thing, in a manner to me. I wish he
did not, for his own sake. For though I hope he will
never suffer on the account of any wilful remissness or
negligence, much less want of fidelity, in me, yet his af-
fairs do not go on so well as if he was more in them,
and less in the tavern. But it becomes not me to reflect
upon my master, especially as what I may write or say
on this head, will rather expose his failings, than do
him service: for as they must be his equals that should
reprove him, so all a servant can observe to others will
do more harm than good to him. One thing is at pre-
sent in my own power, and that is, to double my dili-
gence, that his family suffer as little as possible by his
remissness. And another, I hope, by God's grace, will
be, and that is, to avoid in myself, when my time comes,
those failings which I see so blameable in him. And as
this will be benefiting properly by the example (for that
bee must be worse than a drone, that cannot draw ho-
ney from a bitter as well as a sweet flower) so it will
give you the pleasure of knowing, that your good in-
structions are not thrown away upon me, and that I am,
and ever will be,

Your dutiful son.

LETTER XM.

To a country correspondent, modestly requesting a balance of accompts between them.

S I R,

I Find myself constrained, by a present exigence, to beg you to balance the accompt between us. Tho' matters have run into some length, yet would I not have applied to you, had I known so well how to answer my pressing occasions any other way. If it suits you not to pay the whole, I beg, Sir, you would remit me as much towards it as you can, without prejudice to your own affairs; and it will extremely oblige

Your most humble servant.

LETTER XIII.

In answer to the preceding.

S I R,

I Am very glad I have it in my power to send you now, directly one hundred pounds, on accompt between us, which I do by our carrier, who will pay you in specie. I will soon remit you the balance of your whole demand, and am only sorry that I gave occasion for this application for what is so justly your due. When I send you the rest, which will be in a few days, if I am not greatly disappointed, I will accompany it with an order, which will begin a new debt; which I hope to be more punctual in discharging, than I have been in the last. I am very sincerely,

Your faithful friend,

And humble servant.

J. Langton

LETTER XIV.

From a gentleman to a lady, professing an aversion to the tedious forms of courtship.

Dear Madam,

I Remember that one of the ancients, in describing a youth in love, says he has neither wisdom enough to speak, nor to hold his tongue. If this be a just description, the sincerity of my passion will admit of no dispute: and whenever, in your company, I behave like a fool, forget not that you are answerable for my incapacity. Having made bold to declare this much, I must presume to say, that a favourable reception of this will, I am certain, make me more worthy of your notice; but your disdain would be what I believe myself incapable ever to surmount. To try by idle fallacies, and airy compliments, to prevail on your judgment, is a folly for any man to attempt who knows you. No, madam, your good sense and endowments have raised you far above the necessity of practising the mean artifices which prevail upon the less deserving of your sex; you are not to be so lightly deceived; and if you were, give me leave to say, I should not think you deserving of the trouble that would attend such an attempt.

This, I must own, is no fashionable letter from one who, I am sure, loves up to the greatest hero of romance: but as I would hope, that the happiness I seek for, should be lasting, it is certainly most eligible to take no step to procure it but what will bear reflexion; for I should be happy to see you mine, when we have both out-lived the taste for every thing that has not virtue and reason to support it. I am, Madam, notwithstanding this unpolish'd address,

Your most respectful admirer,

And obedient servant.

LETTER XV.

To a friend, who had promised to lend a sum of money to answer a critical exigence, and drove it off to the last.

Dear Sir,

YOU were so kind as to tell me, a fortnight ago, that you would lend me one hundred pounds on my bond, to answer a demand that my credit would be otherwise a sufferer by. And you were pleased to say, you would have me look no further, and that I should certainly have it in time. I have looked no further, Sir, and the day of payment approaching, you cannot imagine how my mind has suffered by being not absolutely sure of having the money to answer the demand. I hope, Sir, nothing has happen'd to make you alter your mind; for, at this short notice, I shall not know to whom to apply to raise it. In the utmost perturbation of mind, and fear of the worst, my credit being wholly at stake, I beg your answer, which I hope will be to the satisfaction of, Sir,

Your obliged humble servant.

LETTER XVI.

The answer, excusing the pain he had given his friend by his remissness.

Dear Sir,

I will attend you this afternoon with the money, which I had always great pleasure in the thought of supplying you with; and I am most heartily vexed with myself, for giving you the pain and uneasiness that must have attended a mind so punctual as yours, and in a case so critically circumstanced. But I hope you'll forgive me, tho' I can hardly forgive myself. I am, Sir, as well on this, as on any other occasion in my power,

Your sincere friend and servant.

LETTER XVII.

From a sailor to his betrothed mistress.

My dear Peggy,

Barbadoes, Oct. 9.

IF you think of me half so often as I do of you, it will be every hour, for you are never out of my thoughts; and, when I am asleep, I constantly dream of my dear Peggy, I wear my half bit of gold always at my heart, tied to a blue ribband round my neck; for true blue my dearest love, is the colour of colours to me. Where my dearest, do you put yours? I hope you are careful of it: for it would be a bad omen to lose it.

I hope you hold in the same mind still, my dearest dear; for God will never bless you, if you break the vows you have made to me. As to your ever faithful Andrew, I would sooner have my heart torn from my breast, than it should harbour a wish for any other woman besides my Peggy. O my dear love! you are the joy of my life: my thoughts are all of you: you are with me in all I do, and my hope and my wishes are only to be yours. God send it may be so.

Our captain talks of sailing soon for England; and then, and then, my dear Peggy!—O how I rejoice how my heart beats with delight, that makes me I cannot tell how, when I think of arriving in England, and joining hands with my Peggy, as we have hearts before I hope: I am sure I speak for one.

John Arthur, in the good ship George, Capt. Plover, which is returning to England (as I hope we shall soon) promises to deliver this into your own dear hands, and he will bring you too, six bottles of citron-water as a token of my love. It is fit for the finest lady's taste, it is so good, and is what they say ladies drink when they can get it.

John says, he will have one sweet kiss of my dear Peggy, for his care and pains. So let him, my dear love, for I am not of a jealous temper. I have a better opinion of my dearest, than so.—But, oh, that I was in his place—One kiss should not serve my

though I hope it may his. Yet if he takes two, I'll forgive him; one for me, and one for himself. For I love John dearly, and so you may think. Well, what shall I say more? — Or, rather, what shall I say next? — For I have an hundred things crouding in upon me, when I write to my dearest, and, alas, one has so few opportunities! But yet I must leave off; for I have written to the bottom of my paper. Love then to all friends, and duty to both our mothers, concludes me

Your lover till death.

L E T T E R XVIII.

Her A N S W E R.

Dear Andrew,

FOR so I may call you now we are sure, and so my mother says. This is to let you know, that nothing shall prevail upon me to alter my promise made to you, when we parted, with heavy heart's enough, that's true: and yet I had a little incling given me, that Mr Plank's son the carpenter would be glad to make love to me: but do you think I would suffer it, no, indeed; for I doubt not your loyalty to me: and do you think I will not be as loyal to you? — To be sure I will. These sailors run such chances, said one that you and I both know. They may return, and they may not. Well, I will trust in God for that, who has returned safe to his friends, their dear Andrew, so many a time, and often. They will have a mistress in every land they come to, said they. All are not such naughty men, said I, and I'll trust Andrew Trusty all the world over. For why cannot men be as faithful as women too? and for me I am sure no love shall touch my heart but yours.

God send us a happy meeting! Let who will speak against sailors, they are the glory and the safe-guard of the land: and what would have become of Old England long ago but for them? I am sure the lazy, good-for nothing land-lubbers would never have protected us from our cruel foes. So sailors are, and ever shall be,

esteemed by me, and of all sailors, my dear Andrew Trusty. Believe this from,

Your faithful, &c.

P. S. I had this letter writ in readiness to send you, as I had an opportunity, and the captain's lady undertakes to send it with hers. That is very kind and condescending: Is it not?

LETTER XIX.

Of congratulation.

S I R,

DO not admire that I am one of the last, that congratulate with you, your good fortune: the joy which I conceived was so extreme, that it could afford me no sooner the liberty to acquit myself. I know the most of your friends have prevented me, but being their satisfaction is small, I do not wonder if their diligence be the greater. As for my part, my idleness increaseth my merit, since stay and protraction proceeded only from the excess of the gladness of,

S I R,

Your most humble servant,

Tom Joyful.

LETTER XX.

ANSWER.

S I R,

Since you take part in the good fortune, which has befallen me, you must also participate in the advantage of the new credit which it has brought me into. This I advertise you of, to the end, that you let not any occasion slip, wherein you may procure a proof of my friendship, nor forget this advice which I give you, for believe me, I am impatient to have an opportunity of shewing you how much I am,

S I R,

Your friend and servant,

Timothy Grateful.

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LETTER XXI.

Of thanks, &c.

S I R,

I Received the favour of yours with a kind of present :
and know not indeed at this time any other way to
shew my gratitude, than by my hearty thanks for the
same. Every thing you do carries a charm with it, your
manner of doing it is as agreeable as the thing done.
In short, Sir, my heart is full, and would overflow in
your praise, did I not stop, and subscribe myself

Your most obliged,

May 13th, }
1762. }

And most obedient servant,

Thomas Thankful.

LETTER XXII.

Requiring the payment of money, which serves for an
acquittance.

S I R,

I Find, upon stating the accompt between you and me,
that several considerable sums of money are due to
me from you ; wherefore having occasion for thirty
pounds, I desire you to send it me by the bearer hereof
(or here name the carrier) and in so doing you will ve-
ry much oblige me.

As to the payment thereof, this letter and the bearer's
acquittance, shall be your sufficient security and discharge
for so much money. In witness whereof, I have here-
unto set my hand, the sixth day of June, 1762.

John Tradewell.

LETTER XXIII.

A N S W E R.

S I R,

Send by the bearer (or the carrier) thirty pounds ac-
cording to your desire, and have taken his receipt
for it ; but, because you know I send but for small par-
cels of goods at a time, therefore I desire you always

for the future, when I send you money, that you mention in the acquittances the names of the goods for which you received the money, or at least I would have you to mention what money remains unpaid; for thro' want of such certain knowledge, some poor country tradesmen have found great loss, either by the master or their apprentices receiving the money sent, and not mentioning for what goods. Pray take it not ill that I thus write, for I am satisfied of your honest dealing; but know not the servants you intrust to receive the money, I send in small parcels. I rest

Your friend and chapman,

James Punctual.

LETTER XXIV.

From a servant in his master's absence to one of his country customers.

Mr Thomas Merchant,

S I R,

I Received yours, and for answer say, I am very sorry to hear that the goods have not answered your expectation; however, have placed them to the credit of your account, and returned others in their stead by Robert Derham the carrier. I know my master would willingly oblige you in any thing in his power, and as his faithful servant I have herein done my utmost to give you satisfaction, who am

To Mr Tho. Merchant, } Your most humble servant,
clothier in Halifax. }

James Windsor.

LETTER XXV.

From a youth at school in Durham to his parents in London.

Durham, January 12. 1762.

Honoured father and mother,

I Received your kind letter of the 14th of November past, and also the several things therein mentioned, by the Newcastle waggon, for which I return you my most humble and hearty thanks, they coming very seasonably for the relief of my occasions.—I begin to make pretty good improvement in my learning now (tho' at first, it seemed a little irksome and hard) and I hope to gain the point at last for which you sent me hither. Pray accept of my most humble duty to yourselves, and give my kind love to my brothers and sisters, and to my old play-fellows and neighbours; this being all at present from,

Honoured parents, your dutiful son,

Peter Wise.

LETTER XXVI.

From an apprentice to his friends.

Honoured father and mother,

BY these I let you know, that by your care and conduct I am well settled, and pleased with my station, and could not but in duty return you my hearty thanks in a grateful acknowledgment of your love and tender care of me: I will endeavour to go through my business chearfully; and having begun well, I hope I shall persevere to do so to the end, that I may be a comfort to you hereafter, and in some measure make a return of your love and kindness to me, who am

Your dutiful, obedient son,

And most humble servant,

Jeremiah Careful.

LETTERS.

LETTER XXVII.

Of recommendation.

S I R,

THE bearer hereof, James Roberts, I send you, as one whose honesty you may rely on, and my experience of his conduct and fidelity give me a certain kind of confidence in recommending him to you; but you know me, Sir, and I believe you cannot in the least think that I would recommend any one to you, if I had the least umbrage of suspicion or doubt concerning their probity. I am, Sir,

Your real friend and humble servant,

James Goodman.

LETTER XXVIII.

To a country chapman.

Mr James Tradewell,

S I R,

YOU and I have formerly had trading together, and it is not my fault that we do not continue so to do; for assure yourself, I have a great value and respect for you, and on that account none shall be more ready to oblige you in what I may; and pray let us once more re-assume our dealing together, and you shall find, that for any goods you have occasion for in my way, none shall use you more kindly than,

S I R,

Your real friend, and humble servant,

George Punctual.

LETTER XXIX.

By way of petition.

Honoured Sir,

I Am uncertain whether my late misfortunes have come to your knowledge; however, I most humbly pre-

Turne on your good nature, being assured by sundry examples of your compassion, that you will think of, and take pity on the distressed: therefore as an object truly deserving compassion, I most humbly implore and petition you to consider the many losses and disappointments that I have met with in my wayward and unlucky fortune, which have reduced me to such necessitous circumstances, that I cannot possibly proceed in my affairs: you was pleased once to stile me your friend, and so I was indeed; and so I would certainly do now, and shew it by a signal proof of kindness, if our circumstances were changed, by standing between you and misfortune, and screening you from the malevolent and inauspicious influences of cross-grained stars. I doubt not, Sir, but your generosity and goodness is as great; and I hope with all humility, you will be pleased to interpose your good offices, &c. between unlucky fortune, and,

S I R,

Your very humble servant,

George Shipwreck.

L E T T E R XXX.

To a friend to desire him to endeavour to end a difference between two of their friends.

Loving cousin,

AFTER my love to you, this is to let you know, that two of your friends D. N. and J. F. are going to law upon a trifling occasion. I pray come over and see to reconcile them, or send your advice how I may labour to do it, and I shall be very much obliged to you, I remain

Your affectionate kinsman and humble servant,

G. T.

L E T T E R XXXI.

The answer, with advice.

Dear friend,

WITH my unfeigned love to you, I received your letter, and it grieves me to hear that our friends should be for going to law, and not compelled to it, for then much money is spent upon lawyers, to end their differences by jury-men, when two friends may do better.

But if one of the parties is for going to law, and the other not, then he that is against going to law is the more christian, and is not to be blamed, tho' he use the law of the nation to defend himself, neither indeed, can he avoid it, if his adversary seeks revenge, and so forces him to spend his money in his defence.

But you desiring my advice about reconciling those two friends, they having not yet fee'd lawyers, persuade the man that is for going to law, that two friends chosen by both parties may end their differences, or one person only.

And when they have nominated two to end it, they persuade the two parties to put into the hands of those arbitrators, 5 *l.* or more a-piece, according to the value of the trespass. This agreed on, next,

Let the parties sign and seal general releases to each other; then the arbitrators must dispose of the money as they see good, to the party, that has received the wrong, &c

Thus differences among friends may be composed at a much cheaper and better rate than by trial at the law.

But yet 'tis best, when contending parties agree between themselves, as Christ commands, *Mat. xiii. 15.* and forgive trespasses, *Mat. iv. 12.*

Besides this, having general releases, it cuts off all former differences, and saves from divers expences, and from bonds of arbitration and awards, which, tho' they cost money often prove of no effect.

Would to God the advice above, of reconciling men

L E T T E R S.

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difference, would take effect in general, then would
peace flourish, &c.

I remain your friend,

Jerem. Peaceable.

L E T T E R XXXII.

from a gentleman to a gentlewoman, to beg pardon for
an offence.

Madam,

TIS in vain to contend with my judge, and there-
fore, tho' I know my fault has been aggravated
beyond what it could justly bear, yet I will rather sub-
mit myself to your sentence than go about to extenuate
my crime: I am guilty enough that I have offended
you, tho' I never designed it; and when you have done
yourself justice, by inflicting upon me what you think I
merit for my offence, then I will plead my innocency,
and let you know I always was so far from saying any
thing that might reflect upon your fame, that in my o-
pinion, not innocence itself is more unspotted, nor can
unsullied snow appear more white: 'tis true, I am guilty
to give you ground to think I have offended; but my
offence is my misfortune rather than my fault. But,
Madam, what if I appeal from your severer justice to
your mercy? I know you are not inexorable, nor did
you suck the breasts of wolves and tygers: and since
there's so much sweetness in your eyes, there needs must
be some pity in your heart, at least so far as to forgive
a poor repenting criminal. And since you are such a
bright idea of the author of all goodness, you cannot,
but, like him, delight in shewing mercy. I shall hence-
forth endeavour to be like Cæsar's wife, not only free
from guilt, but from suspicion: and further, shall, to ex-
piate my offence, remain

Your truly sorrowful,

And much afflicted humble servant,

Roger Beggardon.

LETTER XXXIII.

ANSWER.

SIR,

I Received your letter, and must let you know, that whatsoever reflects upon my fame (which is far dearer to me than my life) tho' at the most remote distance, is what I cannot but think a fault, and therefore know not how you can be innocent: and, indeed, to plead your innocence, is to accuse me of injustice, in charging you with a crime; but, from what you write, I am inclined to believe, that in what you said, you designed no injury to me; and that it was a crime of inadvertence rather than of malice. And for that reason upon your profession of repentance, I freely pardon you; but charity itself does not injoin me to hug the man I pardon in my bosom: you must not expect therefore to be admitted to the former freedoms you enjoy'd, since you have made so ill an use of 'em, till you have given some more substantial proofs of the sincerity of your repentance. And tho' I pardon this your first offence, yet if you should relapse into your former follies, you must expect a much severer treatment: for then I shall no more esteem myself, as I now do,

Your reconciled friend to serve you,

Sarah Forgivewell.

LETTER XXXIV.

From a gentleman to his mistress, who seeing no hopes of success, respectfully withdraws his suit.

Madam,

I Make no doubt but this will be the welcomest letter that you ever received from me; for it comes to assure you, that it is the last trouble you will ever have from me. Nor should I have so long with-held from you this satisfaction, had not the hope your brother gave me, that in time I might meet with a happier fate, made me willing to try every way to obtain your fa-

L E T T E R S.

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your. But I see all the hopes given me by his kind consideration for me, and those that my own presumption have made me entertain, are in vain: and I will therefore rid you of so troublesome an importuner, having nothing to offer now but my ardent wishes for your happiness, and these, Madam, I will pursue you with to my life's latest date.

May you, whenever you shall change your condition, meet with a heart as passionately, and as sincerely devoted to you as mine: and may you be happy for many, very many years, in the man you can honour with your love: for, give me leave to say, Madam, that in this my end will be in part answered, because it was most sincerely your happiness I had in view, as well as my own, when I presumptuously hoped, by contributing to the one, to secure the other. I am, Madam, with the highest veneration,

Your most obedient humble servant.

L E T T E R XXXV.

From a father to a daughter in service, on hearing of her master's attempting her virtue.

My dear daughter,

I Understand, with great grief of heart, that your master has made some attempts on your virtue, and yet that you stay with him. God grant that you have not already yielded to his base desires! For when once a person has so far forgotten what belongs to himself, or his character, as to make such an attempt, the very continuance with him, and in his power, and under the same roof, is an encouragement for him to prosecute his designs. And if he carries it better, and more civil at present, it is only the more certainly to undo you when he attacks you next. Consider, my dear child, your reputation is all you have to trust to. And if you have not already, which God forbid! yielded to him, leave it not to the hazard of another temptation, but come a-

way directly (as you ought to have done on your own motion) at the command of

Your grieved and indulgent father.

LETTER XXXVI.

The daughter's answer.

Honoured Sir,

I Received your letter yesterday, and am sorry I stay'd a moment in my master's house after his vile attempt. But he was so full of his promises of never offering the like again, that I hoped I might believe him: nor have I yet seen any thing to the contrary: but am so much convinced, that I ought to have done as you say, that I have this day left the house, and hope to be with you soon after you will have received this letter. I am,

Your dutiful daughter.





PRECEDENTS in Law and Business, that all young men ought to know and be acquainted with.

Supercriptions for Letters.

TO the king, or, To the king's most excellent majesty.

To the queen, or, To the queen's most excellent majesty.

To the prince, or, To his royal highness. To the princess, or, To her royal highness.

And in case of the lords spiritual, viz. To his grace the lord archbishop of Canterbury; To the right reverend father in God, &c. The same to the archbishop of York. If to the other bishops, To the right reverend father in God, Archibald lord bishop of, &c. And to the inferior clergy, To the reverend doctor, &c. To the reverend Mr. &c.

To write to temporal lords, viz.

To his grace the duke of _____

To the right honourable the marquis of _____

To the right honourable the earl of _____

To the right honourable the lord viscount _____

To the right honourable the lord _____

All the sons of the nobility, tho' not the immediate heirs, are to be dignified with the title of honourable, as their due by birth-right. And to a knight and baronet by virtue of his patent, the title of honourable and right worshipful is given. As likewise the former to a knight, and worshipful to an esquire.

Every privy counsellor, though not a nobleman is still right honourable: all ambassadors have the stile of excellency, as likewise hath the lord lieutenant of Ireland, and the captain general of his majesty's forces when being; nor has the mayor of London, during his magistrality, a less title than right honourable; and the she-

riffs, during their office are stiled right worshipful; nor does any thing less than the title of esquire extend to the mayors of any corporation during their office.

Directions for the beginning of Letters.

TO the king, Sir, or, May it please your majesty.
To the queen, Madam, or, May it please your majesty.

To the prince, Sir, or, May it please your royal highness.

To a duke, My lord, or, May it please your grace.

To a duchess, Madam, or, May it please your grace.

To a marquis, My lord, or, May it please your lordship.

To a marchioness, Madam, or, May it please your ladyship.

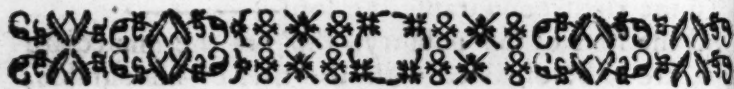
To an earl, viscount, or baron, Right honourable, or, May it please your lordship. In viscount or viscountess, sound not the / in the first syllable.

To a countess, viscountess, or baroness, Madam, or Right honourable, or, May it please your ladyship.

To a knight, Sir, or, Right worshipful; and to his lady, Madam, or, May it please your ladyship.

To a mayor, justice of peace, esquire, &c. Sir, or, May it please your worship.

At subscribing your name end with the same title you began with. As, My lord, Your lordships, &c.



Of Wills and Testaments.

A Will, according to the common acceptation, is the declaration of a person's mind or intent, in relation to what he would have done after his death. The common law calls that a will, whereby lands and tenements are devised; but when it concerns only chattels, viz. moveables or what is not inheritable, it is called a testament; where lands are given by will it is termed a

devise; and where goods and chattles, commonly termed a personal estate, are bequeathed, it is called a legacy.

Devises of lands, &c. must be in writing, signed by the devisor or person giving, generally called the testator, or some person by his express direction, in the presence of three credible witnesses. If a personal estate of above the value of thirty pounds be bequeathed by word of mouth, which the law calls a nuncupative will, it must be likewise done in the presence of three witnesses.

FORM of a WILL.

IN the name of God, Amen. I, A. B. of, &c. being thro' the abundant mercy and goodness of God, tho' weak in body, yet of a sound and perfect understanding and memory, do constitute this my last will and testament, and desire it to be received by all as such: *imprimis*, I most humbly bequeath my soul to God, my Maker, beseeching his most gracious acceptance of it, thro' the all-sufficient merits and mediation of my most compassionate Redeemer, Jesus Christ, who gave himself to be an attonement for my sins, and is able to save, to the uttermost, all that come unto God by him, seeing he ever liveth to make intercession for them, and who, I trust, will not reject me, a returning penitent sinner, when I come to him for mercy; in this hope and confidence, I render up my soul with comfort, humbly beseeching the most blessed and glorious Trinity, one God most holy, most merciful and gracious, to prepare me for the time of my dissolution, and then to take me to himself into that peace and rest, and incomparable felicity, which he has prepared for those that love and fear his holy name, Amen, blessed be God. *Imprimis*, I give my body to the earth, from whence it was taken, in full assurance of its resurrection from thence at the last day: as for my burial, I desire it may be decent, without pomp, or state, at the discretion of my dear wife, and my executors hereafter named, who, I doubt not, will manage it with all requisite prudence. As to my worldly estate, I will and positively order, That all my debts be paid. *Item*, I give to my dear and loving wife, for term of life, this house wherein I now dwell, with all the furniture,

and the lands and tenements that ly about it; and after her death, to my only son G. and his heirs and assigns for ever; to whom I leave also, from the time of my death, my other two estates situate in the parish of T. he paying to each of his sisters, D. and F. 5000 /. And if he die before them, and without issue, then his land (all but the value of 5000 /. which I freely empower him to dispose of as he shall think fit) shall descend, and belong equally to those my two daughters. My poor debtors, who owe me some small matters, which, because they are in low condition, and not well able to pay them, I freely remit them all, forgiving such my debtors, as I desire God should forgive my debts for Christ's sake, I give 60 /. to be distributed according to the discretion of my executors, among such of my neighbours of this parish, as they shall apprehend most to want such assistance, but who do not at present receive alms, nor have any allowance from the parish. I give 30 /. towards the good work for teaching poor children to read, and to say their catechism, in charity schools. The small remainder of my estate I give to my very good friends and dear and kind relations, G. R. and L. O. to be divided equally between them: and do constitute them executors of this my last will and testament, and trustees for my wife and children. In witness whereof, I have hereunto set my hand and seal, the 3d day of June, in the year of our Lord, 1762.

Witness, T. B.
R. T.
R. B.

A. B. (L. S.) here I take
off my seal, and do declare
this to be my last will and
testament.

Another WILL

IN the name of God, Amen. I, A. M. of, &c. being in perfect health (praised be God) do make this my last will and testament as followeth. *Imprimis*, I give to my daughter L. M. 20 pounds of, &c. *Item*, I give to my daughter C. M. 50 pounds of like lawful money, and the box in the room where I ly, marked (P. Q.) and all the linen therein; with some other goods, and the rest and residue of my goods and chattles, and personal estate, after payment of my debts, legacies, and

funeral expences; and unto my son S. M. whom I make sole executor of this my last will and testament, I give, demise, and bequeath to him and his heirs, all, and every my messuages, lands, tenements, and hereditaments whatsoever and wheresoever, which I also charge with the payment of my said legacies. In witness whereof I have hereunto set my hand and seal, the 23d day of June, and in the year of our Lord, 1762.

Sealed, published, and declared by the above named A. M. for and as his last will and testament, in the presence of us,
A. B. C. D. E. F.

Observations concerning wills and testaments.

THE party who signs and seals a will, is to do it in the presence of three witnesses, who are to set their hands to it (not under three) and it is not much matter whether the witnesses hear the will read or no, so as they hear the party say he acknowledgeth that writing to be his will to which he set his hand and seal; for if they did hear it read, it cannot be supposed that they can remember the contents thereof. A man above fourteen years of age may make a will of his goods, and a woman above twelve; but neither can will their lands until twenty one years.

If a man dies without a will, and leaves both free-lands and goods, his wife will have the third part of the profits of the land, during her life, and the third part of the goods for ever; and the next of kin to the husband the other two third parts. But he that makes a will, and leaves his wife a certain sum to be paid her yearly, during her life, by his executor, should also give her some of his moveable goods.

If a man dies without a will signed, and sealed, leaving many children, the eldest son claims all the land; but, if he leaves daughters only, they will be co-heirs to all free-land.

Copy-hold land is not given by will, but passed by surrender in court.

To will land to E. F. for ever; or to G. H. and his assigns this is but for life; but I give and demise unto E. F. his heirs and assigns for ever, so G. H. may sell it.

The word executor, is the name given to him that is to see the will performed; but if it be a woman, she is called in the will executrix.

Set your house in order while you are in health.

For a (will) testament is of force after men are dead,

Heb ix. 17. but not before.

For if a man hath sealed his will and delivered it to a friend to keep, he may make another, which makes the former will void.

The FORM of a LETTER of ATTORNEY, to execute a particular business.

K NOW all men by these presents, that I, A B. of G. in the county of D, yeoman, for divers good causes and considerations, me hereunto moving, have made, ordained, constituted, and appointed, and by these presents, do make, ordain, constitute, and appoint my trusty friend I K, of M; gent. my true and lawful attorney, for me, in my name, and to my use, to ask demand, recover and receive of, and from B C, of, &c. the sum of, &c. giving, and by these presents, granting to my said attorney, my sole and full power, and authority, to take, pursue, and follow such legal courses for the recovery, receiving, and obtaining of the same, as I myself might or could do, were I personally present; and upon the receipt of the same, acquittances, or other sufficient discharges for me, and in my name, to make, sign, seal and deliver; as also one or more attorney or attorneys under him to substitute and appoint, and again at his pleasure to revoke; and farther to do, perform and finish for me, and in my name, all and singular thing or things, which shall or may be necessary, touching and concerning the premises, as fully, thoroughly, and entirely, as I the said A B, in my own person might, or could do, in or about the same: ratifying, allowing, and confirming whatsoever my said attorney shall lawfully do, or cause to be done, in and about the execution of the premises,

by virtue of these presents. In witness whereof, I have hereunto set my hand and seal, the 12th day of September, in the 2d year of the reign of our sovereign lord George III. by the grace of God, king of Great Britain, &c. and in the year of our Lord 1762.

Revocation of a Letter of Attorney.

K NOW all men by these presents, that whereas I _____ of _____ in the county of _____, yeoman, upon the trust and confidence which I had in _____ of _____, gent, by letter of attorney under my hand and seal, bearing date _____, did make, ordain, constitute and appoint the said _____ my lawful attorney, for me, and in my name, and to my use, to ask, demand, recover and receive, of and from _____ of _____, bookseller, the sum of _____, as thereby more at large may appear : now know ye, that I the said _____, for divers good causes and considerations me hereunto moving, have, and by these presents do revoke, disannul and make void the said letter of attorney, and all power and authority, therein to him the said _____ given, in witness, &c.

Indenture for an Apprentice.

T HIS indenture witnesseth, that _____ son of _____, &c. doth put himself apprentice to _____, shoemaker, to learn his art or mystery, and with him after the manner of an apprentice to serve, from the day of the date hereof for and during the term of seven years next ensuing; during all which term, the said apprentice, his said master faithfully shall serve, his secrets keep, and all his lawful commands every where gladly do; he shall do no damage to his master, nor see it to be done by others, without letting or giving notice thereof to his said master : he shall not waste his master's goods, nor lend them unlawfully to any. He shall not commit fornication, nor contract matrimony during the said term; he shall not play at cards, dice or any other unlawful game, whereby his master may be damaged, with his own goods, nor the goods of others; he shall not ab-

sent himself day or night from his said master's service unlawfully: nor haunt ale houses, taverns, or play-houses; but in all things behave himself as a faithful apprentice, in the trade or mystery he now followeth; and the said master shall procure and provide for him sufficient meat, drink, apparel, lodging, washing and all other necessities during the said term. And for the true performance of all and every the said covenants and agreements, either of the said parties bindeth himself unto the other firmly by these presents. In witness whereof, they have interchangeably set their hands and seals hereunto, this twentieth day of September, in the second year of the reign of our sovereign lord George III. king of Great Britain, France and Ireland, &c. and in the year of our Lord, 1762.

Letter of Attorney from a Seaman.

K NOW all men by these presents, That I. _____, mariner, now belonging to his majesty's ship the Ann, for divers good causes and considerations me hereunto moving, have, and by these presents do make, ordain, constitute and appoint my trusty friend _____, citizen and baker of Bristol, my true and lawful attorney for me, and in my name, and for my use, to ask, demand, and receive of and from the right honourable the treasurer, or pay master of his majesty's navy, and commissioners for prize-money, and whom else it may concern: as well all such wages, and pay, bounty-money, prize-money, and all other sum and sums of money whatsoever, as now are, and which hereafter shall or may be due or payable unto me: also all such pensions, salaries, smart-money, and all other monies and things whatsoever, which now, or at any time hereafter is, or shall be due to me for my service, or otherways in any of his majesty's ship or ships, frigates or vessels: giving and hereby granting unto my said attorney full and whole power to take, pursue, and follow such legal ways and courses for the recovery, obtaining and discharging the said sum and sums of money, or any of them, as I myself might, or could do, were I personally present. And I do hereby ratify, allow, and confirm all and whatsoever

B O N D S.

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ver my said attorney shall lawfully do, or cause to be done, in and about the execution of the premises, by virtue of these presents. In witness, &c.

A B O N D.

K NOW all men by these presents, That I (Robert Scott, of the county of Durham, merchant) am held, and firmly bound unto (James Syms of Doncaster, in the county of York, Esq;) in the sum of (Two hundred) pounds of good and lawful money of Great Britain, to be paid to the said (James Syms) his heirs, executors, administrators, or assigns: to which payment, well and truly to be made, I bind myself, my heirs, executors, administrators, or assigns, firmly by these presents. Sealed with my seal. Dated the (first day of June) in the 2d year of the reign of our sovereign lord (George the third) by the grace of God, king of Great Britain, France and Ireland, defender of the faith, and in the year of our Lord God (One thousand seven hundred and sixty two.)

The C O N D I T I O N.

T HE condition of this obligation is such, that if the above bounden (Robert Scott) his heirs, executors or administrators, do well and truly pay, or cause to be paid, unto the above mentioned (James Syms) his executors, administrators, or assigns, the full sum of (one hundred pounds) with lawful interest for the same, of good and lawful money of Great Britain, on the (first day of January next) ensuing the date hereof; then this obligation to be void, or else to remain in full force.

Sealed and delivered (being

first legally stamped) in
presence of

Robert Scott.

F. G.

H. I.

 When a bond is given in consideration of the value received, the bond is always to be made for double the value in the condition.

What is to be varied, and made agreeable to the circumstances before you, is in those words inserted between ().

A Condition to stand to the Award of Arbitrators.

THE condition of this obligation is such, that if the above bounden (James Sly of Newcastle, merchant) his heirs, executors and administrators, and every of them, do and shall in all things, well and truly stand to, obey, abide by, perform, fulfil, and keep the award, order, arbitrament, final end and determination of (Andrew Mills and James Mills, of Bristol, merchants) arbitrators indifferently named, elected, and chosen, as well on the part and behalf of the above bounden (James Sly) as of the above named (James Syms) to arbitrate, award, order, judge, and determine of and concerning all manner of actions, causes, and causes of actions, suits, bills, bonds, specialities, judgments, executions, extents, accompts, debts, dues, sum and sums of money, controversies, trespasses, damages and demands, whatsoever, at any time or times heretofore had, made, moved, brought, committed, sued, prosecuted done, suffered, committed, or depending by or between the said parties, so as the award be made, and given up in writing, under their hands and seals ready to be delivered to the said parties on or before the () next ensuing the date above mentioned;) but if the said arbitrators do not make such an award, of and concerning the premises, by the time aforesaid; that then the said (James Sly) his heirs, executors, and administrators, for his and their parts and behalf, do in all things well and truly stand to, obey, abide, perform, fulfil, and keep the award, order, arbitrament, umpirage, final end and determination of (John Jack, of Lincoln, Esq;) umpire indifferently chosen between the two parties, to end the said matter and differences, so as the said umpire do make his award and umpirage of, and concerning the premises, and deliver the same in writing under his hand and seal, to the said parties, on or before the () day of () next ensuing the date above said, then this obligation to be void, or else to remain in full force.

Sealed and delivered (being legally stamped) in presence of, &c.

James Sly, (L. S.)

Note, Both the parties are in this case to be mutually bound, *mutatis, mutandis*; and if there be no umpire admitted of, the latter part of the condition, beginning [But if the said arbitrators] is to be omitted.

The Form of an Umpirage of A ward.

TO all people, to whom this present writing shall come; I (John Jack of Lincoln, Esq;) umpire, indifferently chosen between (James Slight, and John Fox of London, merchants) send greeting; Now know ye, that I the said (John Jack) having deliberately heard, considered, and understood the griefs, allegations, and proofs of both the said parties, and being willing, as much as in me lieth, to set the said parties at unity and good accord, do by these presents, arbitrate, award, order, deem, decree and judge, that the said (James Slight) his executors, administrators, or assigns, do, and shall well and truly pay, or cause to be paid unto the said (John Fox) his executors, administrators, or assigns, the sum of () of lawful money of Great Britain, on the () day of () next ensuing the date of these presents; and that upon payment thereof, the said (James Slight and John Fox,) shall, at their own proper costs and charges, seal, subscribe, and as their several acts and deeds, deliver each to the other, a general release in writing, of all matters, actions, suits, causes of actions, bonds, bills, covenants, controversies, and demands whatsoever, from the beginning of the world to the (sixteenth day of July last past) and in the () year of our sovereign lord (George III.) king of Great Britain, &c. In witness whereof I have hereunto set my hand and seal, the (25th day of June 1762).
Sealed and delivered (being duly stamped) in presence of, &c. John Jack. [L. S.]

A Letter of Licence to a Debtor.

TO all people, to whom this present writing shall come; we whose names are here under subscribed, and seals affixed, creditors of [D. F. of Bristol, merchant]
G

chant] send greeting. Whereas the said [D. F.] on the day of the date of these presents, is indebted unto us severally, in divers considerable sums of money, which at present he is not able to satisfy unto us, without respect, and time to be given unto him for the payment thereof; Know ye therefore, That we the said creditors, for divers good causes and considerations, us thereunto moving, have given and granted, and by these presents, do give and grant unto the said [D. F.] our sure and safe conduct and free licence, that the said [D. F.] shall, and may safely come and go, and resort unto us, and every one of us his said creditors, to compound and take order with us, and every one of us for all and every of our said debts, and to go about any other business to any other person or persons whatsoever, without any trouble, suit, arrest, attachment, or other molestation to be offered or done to him, the said [D. F.] his wares, goods, monies, or other merchandizes whatsoever, by us, or any of us, or by the heirs, executors, administrators, partners, or assigns of us, or any of us, or by our, or any of our means or procurement, to be sought or procured to be done, from the day of the date hereof, unto the full end and term of [one whole year] next ensuing. And we the said creditors, whose names are here underwritten, do hereby covenant and grant, and every one of us for his own part, his executors and administrators covenanteth and granteth, to and with the said [D. F.] that if any trouble, wrong, damage, or injury shall be done unto him the said [D. F.] either in his body, goods, or chattles, or any of them, within the said term of [one year] next coming after the date hereof, by us, or any of us, his said creditors, or by any other person or persons, by or through the procurement, consent, or knowledge of us, or any of us, contrary to the true intent and meaning of this our present writing of safe conduct, that then the said [D. F.] by virtue of these presents, shall be discharged and acquitted for ever towards and against him and them, of us, his and our heirs, executors, administrators, partners, or assigns, and every one of them, by whom, and by whose means he shall be arrested, troubled and attached, or damaged of all manner of actions, suits, quarrels, debts, and

mands; either in law or in equity, from the beginning of the world, to the day of the date hereof; in witness whereof, we have hereunto set our hands and seals the [fourth day of July] Anno Domini 1762.

Sealed and delivered (being first duly stamped) in presence of, &c.

A. B. [L. S.]

C. D. [L. S.]

E. F. [L. S.]

A B I L E of S A L E.

K NOW all persons whom it may concern: That I [John Trader of Kendal, in the county of Westmoreland, weaver] for and in consideration of the sum of [one hundred pounds] of lawful money of Great Britain, to me in hand paid, by [Daniel Dike, of London, Esq;] the receipt whereof I do hereby acknowledge, have bargained, sold, and delivered, and by these presents, according to the due form of law, do bargain, sell, and deliver unto the said [Daniel Dike] forty pieces of Kendal cotton, one hundred pairs mens hose, fifty womens do. fifteen boys do. sealed up with my seal: To have and to hold the said bargained premises, unto the said [Daniel Dike] his executors, administrators, and assigns for ever. And I the said [John Trader] for myself, my executors and administrators the said bargained premises unto the said [Daniel Dike] his executors, administrators and assigns, against all persons, shall and will warrant, and for ever defend, by these premises: [If the bargained premises be redeemable, by a limited time, a proviso of this nature is added.] Provided nevertheless, that if I the said [John Trader] my executors, administrators and assigns, or any of us, do and shall well and truly pay, or cause to be paid unto the said [Daniel Dike] his executors, administrators, or assigns, the sum of [one hundred and three pounds] as principal and interest, lawful money of Great Britain, on the [thirtieth of October, next ensuing the date hereof] for redemption of the bargained premises; then this present bill of sale shall be void, and of no effect: but if default be made in the payment of the said [one hundred and three pounds] in part or in the whole, contrary to the manner and form aforesaid, that then it shall remain and be in full force and

virtue: in witness whereof, I have hereunto set my hand and seal, the [twenty sixth day of June] in the year of our Lord [1762]

Sealed and delivered, &c.

John Trader. [L. S.]

A general Release.

KNOW all men by these presents, That I, [Thomas Stivens of London, grocer] have remitted, released, and for ever quitted claim, and by these presents, do for me, my heirs, executors and administrators, remise, release, and for ever quit claim, unto [Jeremiah Bucks, citizen and mercer of London] his heirs, executors and administrators, all and all manner of actions, causes and causes of actions, suits, bills, bonds, writings obligatory, debts, dues, duties, accompts, sum and sums of money, judgments, executions, extents, quarrels, controversies, trespasses, damages and demands whatsoever, both in law and equity, or otherways howsoever, which against the said [Jeremiah Bucks] I ever had, now have, and which I, my heirs, executors and administrators, shall or may have, claim, challenge or demand, for or by reason or means of any matter, cause or thing, from the beginning of the world, to the day of the date of these presents: in witness whereof, I have hereunto set my hand and seal, the [twelfth day of July] and in the year of our Lord [1762.]

Signed, sealed and delivered [be-

ing first legally stamped] &c. Tho. Stivens. [L. S.]

Of Wives, Children and Servants.

THE woman, at her marriage, becomes wholly the man's, together with all her moveable goods, and if goods be given to a married woman, they immediately become her husband's: she cannot let, sett, sell, give away, or alienate any thing without her husband's consent, not her very apparel, which at her husband's decease goes to the executor, or administrator of her husband (excepting her necessary apparel) which with the consent of her husband, she may give by will, not other ways by our English laws.

The wife, after her husband's death, having no jointure settled before marriage, may challenge the third part of his yearly rents of free-lands, for her life; and also the thirds of the rents of such free-lands as he sold in his life time, if she did not consent to a fine; but she can claim no thirds of such lands as her husband buys when he has sold them again, and dieth, if he puts another person's name in the deed besides himself, when he bought them. But if her husband dieth without a will in writing, leaving no child, she will claim the thirds, as above, and a third part of the goods for ever, and the other two thirds go to the next of his kindred.

But if she be the wife of a freeman of the city of London (he dying without a will, leaving no child, as before) she will challenge by law, three parts of four of her husband's goods and chattles, and one third of the profits of his free-lands for life, the goods for ever. By late act of parliament persons since made free are not bound by this law.

The husband must answer to his wife's faults; if she wrong another by her tongue, or by trespass, he must make satisfaction; and pay the debts that she causeth, except he did before give notice; that they should not trust her. This is disputable.

A woman cannot hope to have the thirds of her husband's land, which he mortgaged before marriage, till the money's paid, and the mortgage be cancelled.

A man and wife are joint purchasers of land, to them and their heirs and the survivors, and heirs; and if the husband dies, the wife may sell the land without the consent of their children.

A woman that kills her husband is to be brunt alive.

If a wife brings forth a child, begotten by another before marriage, but born after marriage, the husband must own the child as heir at law.

A wife cannot be a witness for, or against her husband, they two being but one in law.

If a wife brings forth a child during her husband's long absence, though it be some years, yet if he lived all the time within this island, he must father that child; and that child be her first-born son; he shall inherit the

husband's estate, if intailed, or left without a will. This has been lately tried, and decided otherwise.

A woman that doth not hear of her husband for seven years together, may marry another man.

If a woman have no sons, but daughters, the lands, as well as goods, are equally divided among the daughters, who are co-heirs.

Man and wife are so fast joined by our law, that they may not be wholly parted by our law, by any agreement between themselves; but only by the sentence of a proper judge, for adultery, &c.

Of Children, Sons and Daughters.

A Father may give all his estate (not intailed) to any one child, the consideration of which keeps some children in awe.

A son at the age of 14, may chuse his guardian, be an executor, may consent to marriage (if not an apprentice) may, by will, give his goods and chattles, and become bound in bonds, or covenants for necessities, food, rent, schooling, &c.

At the age of 15, he may be sworn to his allegiance to the king.

At 21, he is said to be of full age, may sell land (which in other countries is not till 25) when the heat of youth is somewhat abated, and they begin to be stayed in mind, as well as in growth.

A daughter at seven years may consent to marry, though she may afterwards dissent; at nine she may consent to a jointure.

At 12, she is able to confirm her former consent to marriage, and if at that age she dissent not, she is bound she may at that age make a will of her goods, and become bound for necessities, &c.

At 13 she may receive her lands into her own hands that are given, or fall to her. At 21 she may lett, sell or will her lands.

The eldest son inherits all his father's lands (if the father died without a will) and to the younger children are disposed goods and chattles, and commonly the eldest son's wife's portion,

If a man marry a wife having free land, and she dieth, leaving a child that is heard to cry, tho' it dieth presently, the man shall have the lands for his life. This is called, The courtesy of England.

Of servants.

Ordinary servants are hired, commonly for a year (whereby they become inhabitants of that parish) at the end whereof they may be free (giving 3 months warning before) and may place themselves with other masters; only it is accounted discourteous and unfriendly, to take another man's servant, before leave given by his master; and indiscreet to hire a servant without a certificate of his diligence and faithfulness, in the service of his last master, or somewhat to this effect.

Memorandum, That I, G. D. do certify, that J. B. the bearer hereof, hath been an honest and faithful servant unto me. Witness my hand, the 4th of May, 1762.



Forms of Receipts, Notes and Bills, &c. necessary to be understood in order to forming the man of business.

Various forms of acquittances, when an apprentice, or servant receives money for the use of his master, or employer, &c.

Received the 27th of July, 1762. of Mr Thomas Adams, Nine pounds twelve shillings, for my master David Stone, on accompt,

Per James Thompson.

Forms of Acquittances.

Received the 6th of September, 1762. of Henry Holland, Fifty eight pounds ten shillings and four pence, in full payment for my master Andrew Jones,

Per Matthew Burne

L. 58 10 4

Received the 24th of August, 1759. of Mr James Johnson and company, Two hundred pounds, for Mr George Bedford and partners,

Per Richard Simpson

L. 200 —

Received the 22d of February 1762. of the honourable the united East India company, Four thousand pounds sixteen shillings, and sixpence, for Mr English and company,

Per Peter Spink

L. 4000 16 6

Received the 26th of April, 1762. of the governor and company of the bank of England, Ten thousand fifty pounds eighteen shillings, for Thomas Caxton and company,

Per Edward Carter

L. 10,050 18 —

Received the 26th of June, 1762. of the worshipful company of mercers, Eighty six pounds for my father Christopher Yates,

Per Edward Yates

L. 86 —

Received the 24th of April, 1762. of Mr Richard Foxcraft, Fifteen pounds, for a quarter's rent due at Christmas last, for my master George Gibbons,

Per Isaac Jobson

L. 15 —

Forms of Acquittances.

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Received the 14th of July, 1762. of Mr Lewis Arm-
strong, Thirty five pounds eight shillings, in part of a
bill of One hundred pounds, payable to Mr Simon Pure
by order, due the 10th instant,

Per George Norton.

£ 35 — —

Received the 29th of February, 1762. of Mr Thomas
Laurence, by order of Mr John Kent, the sum of One
hundred and fifty pounds six shillings and ten pence, on
account of Mr Nathaniel Combs, of Appleby: I say re-
ceived for my masters George Pye and partner,

Per Isaac Taylor.

£ 150 06 10

Forms of Acquittances, upon receipt of money, by mas-
ters and men of business themselves.

Received the 16th of June, 1762. of Messrs Tho-
mas and George Simpson, Six hundred and forty
pounds on accmpt,

Per William Barnet.

£ 640 — —

Received the 4th of September, 1762. of the honou-
rable William Parrot, Esq; the sum of Three hundred
and fifty pounds, in full of all demands for self and
company,

Per George Dawson.

£ 350 — —

Received the 17th of August, 1762. of Mr James
Harris, Thirty pounds, in full for interest of twelve hun-
dred pounds, due at Midsummer last,

Per Thomas Lowther.

£ 30 — —

Received the 19th of September, 1762. by the order and for the use of Mr Benjamin Blundell, of Mr Stephen Carr, Ten pounds ten shillings, and allowed for taxes and repairs, one pound ten, together, the sum of twelve pounds, in full for a quarter's rent, due at Midsummer last,

Per Joseph Rentroll

L. 12 — —

Received the 23d of June, 1762. of the executor of James late earl of Bath, by the hands of Mr John Thomson, the sum of Sixty five pounds twelve shillings in full for my half year's annuity due at Lady-day last,

Per Charles Stewart

L. 65 — —

Received the 1st of June, 1762. of Robert Pringle Esq; and the other owners of the ship Berwick, the sum of One hundred and eight pounds ten shillings, in full for cordage, tackle, and trimming, furnished to said ship,

Per Andrew Shipwright

L. 108 — —

Promissory Notes by Bankers Apprentices and Servants.

Bristol, September 7th, 1762.

I Promise to pay the honourable Charles Snell, Esq; or bearer, on demand, Fifty pounds,

For Sir Richard Jones and partners,

Per Anthony Timon

£. 50 — —

Forms of Promissory Notes.

83

London, November 20th, 1762.

I promise to pay the royal African company or bearer, on demand, Four thousand six hundred and sixty four pounds thirteen shillings and sixpence, for my masters George and James,

Per Adam Eve.

4664 13 06

Promissory Notes for a man's self, &c.

I Promise to pay to Nathaniel Smith, or bearer, on demand, Nine hundred pounds, June 2d, 1762.

Per Thomas Hunt.

900

I promise to pay to the governor and company of the Bank of England, Ten thousand pounds, value received this 6th of June, 1762. for myself and partners,

Per Israel Jack.

10,000

London, August 2d, 1762.

I promise to pay Mr Daniel Pope, Cashier of his majesty's revenue of excise, or order, forty days after date, five hundred and thirty pounds, value received,

Per Andrew Cash.

530

I promise to pay to Peter Paul, Esq; or order, on demand, Four hundred and ninety pounds, value received this 9th of April, 1762.

Per Peter Vernon.

490

I promise to pay to Francis Dove, Esq; or order, the sum of sixty pounds, on demand, after a receipt of a bill of exchange drawn the 9th current, by George Trade, and Henry Henly of Northampton, mercer, for the like

Sum payable to William Pack, Esq; or order, which the said Frances Dove has indorsed to me, this 25th of December, 1762.

L. 60 — —

Per James George

A Bill of Debt.

K NOW all men by these presents, That I Michael Pool, of the county of Durham, gent. do own and acknowledge myself justly to stand indebted to Alexander Anderson of the county of York, haberdasher, the just sum of twenty four pounds, of good and lawful money of Great Britain, and which I do hereby promise to pay unto him the said Alexander Anderson, on the 6th day of April, next ensuing the date hereof. Witness my hand this 12th day of September, in the year of our Lord 1762.

Michael Pool

Another.

M Emorandum, That I Thomas Bell, of the parish of St Ambrose, salter, do owe and am indebted to James Purves of the said place, mercer, the sum of Sixty pounds of good and lawful money of Great Britain, which sum I promise to pay to the said James Purves, his executors, administrators, or assigns, on or before the 23d day of October next. In witness whereof I have hereunto set my hand and seal, the 27th day of June, in the year of our Lord 1762.

Thomas Bell. (L. S.)

Signed, sealed, and delivered,
(being first legally stamped)
in presence of John Thompson.

Michael Wentworth.

A promissory note, mentioning order, is indorseable from one person to another, which is done by the present possessor's writing his name on the back of it, and delivering it up to the party, to whom he intends to assign over his property therein.

The delivering up a promissory note to the person who signed it, is a sufficient voucher of it's being paid, nor there need of writing a receipt thereon.

Promissory Notes.

83

Promissory notes, and book debts, if not legally demanded in the space of six years, cannot be recovered by law upon the debtor's pleading the statute, but they are recoverable in chancery.

If you keep a promissory note on demand, in your own hands above three days, and the person it is upon should fail, the loss will be your own; but if he fail within three days, it will light in equity on the person that paid it you.

Promissory Notes.

Borrowed and received of John Derby, Esq; Seventy pounds, which I promise to pay to him, or order, on demand. Witness my hand this 29th of September, 1762.

Per Joseph Jones.

70 0 0

Borrowed and received of Mr Timothy Trusty, Thirtypounds, which I promise to pay to him, or order, three months after date. Witness my hand this 14th August, 1762.

Per Roger Dods.

30 0 0

I promise to pay to James Forrester, Esq; or order, two hundred pounds eighteen shillings, on demand, he received. Witness my hand this 17th day of July 1762.

Per Roger Cook.

200 0 0

N. B. Observe in promissory Notes, that the value received is mentioned, or they are of no force.



ARITHMETIC.

After you are compleat in writing, you next proceed to arithmetic, the knowledge of which is necessary, that scarce any thing in life, and nothing in trade can be done without it.

And first of notation and numeration.

In notation we must observe that all numbers may be and now generally are expressed by, or composed of the ten figures or characters following, viz.

One, two, three, four, five, six, seven, eight, nine, cypher

1 2 3 4 5 6 7 8 9 0

Nine of these are called significant figures, to distinguish them from the cypher, which itself signifies nothing; but as it placed (in whole numbers) serves to increase the value of the next figure or figures that stand before it; as 3 is but three; but before the cypher thus, 30, the 3 becomes three, &c. — We are to note, that every one, or any of the above nine figures or digits have two values, one certain, and another uncertain: the certain value is, when it stands alone by itself: the uncertain is, when joined or placed with other figures or cyphers: for when any one of these figures stands alone, it signifies no more than its own simple value: as 5 is but five, 4 but four, 6 is but six, and 3 more than three, &c. And this is the certain value of a figure: but when another figure or cypher is annexed, then they are increased in their value ten times: 5, or five units, or ones, to five tens or fifty, 4 to 4 tens or forty, 6 to 6 tens, or sixty, and 3 to 3 tens, thirty, as thus, 51, fifty-one: 42, forty-two: 63, sixty-three: 34, thirty-four, &c. Again, if any of

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bird,

Tens of thousands of millions
Thousands of millions

11 10
2 3
1 2
1

aid figures stand in the third place towards the left-hand they then signify so many hundreds as singly they express unites or ones; as 500 is five hundred, 400 four hundreds, 600 six hundreds, and 300 three hundreds, &c. If any of them possess the fourth place towards the left hand, they are so many thousands as they contain unites: and so any, or every figure increases by a tenfold proportion, from the right hand to the left, according to the place it is found or stands in; so that 5 may be but five, or fifty; five hundred, or five thousand; in the first place, 5; in the second, 50; in the third, 500; and in the fourth place, 5000, &c.

The Numeration Table.

Tens of thousands of millions	Thousands of millions	Hundreds of millions	Tens of millions	Millions	Hundreds of thousands	Tens of thousands	Thousands	Hundreds	Tens	Unites	Thousands of millions	Millions	Thousands	Unites, or ones
11	10	9	8	7	6	5	4	3	2	1				
2	3	4	5	6	7	8	9	0	1	2	123	456	789	012
1	2	3	4	5	6	7	8	9	0	1	12	345	678	901
	1	2	3	4	5	6	7	8	9	0	1	234	567	890
		1	2	3	4	5	6	7	8	9		123	456	789
			1	2	3	4	5	6	7	8		12	345	678
				1	2	3	4	5	6	7		1	234	567
					1	2	3	4	5	6			123	456
						1	2	3	4	5			12	345
							1	2	3	4			1	234
								1	2	3				123
									1	2				12
										1				1
										H	2			

For the easier reading of any number, first get the words at the head of the table by heart; as units, tens, hundreds, thousands, &c. and applied thus, 75, five units, five, and 7 tens, seventy, that is, seventy five. Again, 678; 8 units, eight, 7 tens, seventy; and 6 hundred, six hundreds; that is, six hundred seventy eight. Once more, 3456; 6 units, six; 5 tens, fifty; 4 hundreds, four hundred; 3 thousands, three thousands; together three thousand four hundred fifty six. Read the 4th line of the table downwards, viz. 123456789; here the valuation of the figures is from the right hand to the left, as 1 in the ninth place is hundreds of millions, but to be read from the left hand to the right; thus, one hundred twenty three millions, four hundred fifty six thousand, seven hundred eighty nine. But any number may yet be read more intelligibly, viz. by stops, thus; make a comma at every third figure or cypher, beginning at the right hand, and so on towards the left, making a stop after every third figure or cypher, as aforesaid, thereby distinguishing every third place into hundreds, as hundreds of units, hundreds of thousands, hundreds of millions, and hundred thousands of millions, &c. and for trial let's read the first line of the table; the last place in valuation is hundred thousands of millions, and to be pointed into periods thus, 123,456,789,012; and read thus, one hundred twenty three thousand, four hundred fifty six millions, seven hundred eighty nine thousand twelve; that is no hundreds, but twelve. Again, read the following number, viz. 276,245,678,921,460; here the first point or period is betwixt 4 and 1, and the last betwixt 2 and 6, and to be read thus; 276 millions of millions, 245 thousands of millions, 678 millions, 921 thousands, 460 units or ones. And thus may any number be read with ease, tho' a large one; and thus are large numbers or sums expressed, or set out in the exchequer, bank and lottery tickets, &c. as thus, No. 225,156—19,478—and 42,000, &c. the foregoing table of numeration is on the right hand distanced out into periods, for the easier reading thereof.

Numbers to be read and written.

96, Ninty six
 242, Two hundred forty two
 7924, Seven thousand nine hundred 24
 54006, Fifty four thousand and six
 524207, Five hundred twenty four thousand 207
 4606240, Four millions 606 thousand 240
 62700472, Sixty two millions 700 thousand 472
 42060204, Four hun. 74 millions 960 thousf. 204
 420007042, Four thousf. 214 millions 7 thousf 42
 70706420042, Four hundred and 70 thousand, 706
 millions 420 thousand and 42

Of numerical letters.

Sometimes numbers are expressed by letters; especially in the bible, to signify the chapter or psalm; at the bottom of title pages of books for the date of the year, and frequently in inscriptions of funeral monuments, &c. for which reason 'tis necessary to know how to read them. Therefore observe, that I. stands for 1, or one unit, II. for 2. III. for 3, IV. for 4. V. for 5. VI. for 6. VII. for 7. VIII. for 8. IX. for 9. X. for 10. XI. for 11. XII. for 12. XIII. for 13. XIV. for 14. XV. for 15. XVI. for 16. XVII. for 17. XVIII. for 18. XIX. for 19. XX. for 20. XXI. for 21. &c. XXX. for 30. XXXI. for 31. &c. XL. for 40. XLV. for 45. &c. L. for 50. LI. for 51. &c. LX. for 60. LXI. for 61. &c. LXX. for 70. LXXI. for 71. &c. LXXX. for 80. LXXXI. for 81. &c. XC. for 90. XCI. for 91. &c. C. for 100. CC. for 200. CCC. for 300. CCCC. for 400. D. or ID. for 500. DC. for 600. &c. M. or DID for 1000. &c. Thus the present year 1762. is wrote MDCCCLXII.

ADDITION.

Is the putting together two or more numbers or sums in order to make them one total, or whole sum.

Here we must always observe to set the numbers to be added, orderly one under the other; that is, units under units, tens under tens, hundreds under hundreds, &c. as in the subsequent examples.

Addition of numbers of one denomination.

Yards

Gallons

Pounds

Tens	Units
2	4
4	6
6	8
8	2
2	4
4	2

Hund.	Tens	Units
7	5	6
5	3	2
4	7	8
6	9	6
4	2	2
6	7	8

X of Th.	Thous.	Hund.	Tens	Units
5	7	7	6	2
3	9	9	4	4
6	7	2	2	2
7	9	6	7	4
0	2	4	6	2
0	0	3	9	0

286

3562

247484

In addition of simple numbers, whether it be yards, gallons, pounds, or any thing else, remember to carry 1 for every 10 you find in the row or rank of figures being units to the next row of tens; and the like from the rank of tens to the row of hundreds, &c. and whatever it makes in the last, you must set it down, amounting to what it will. Thus:

The numbers above are set down in order, as before directed; that is, units under units, tens under tens, &c. as may be plainly understood, by being indicated at the head of each row or rank with units, tens, hundreds, &c. Then in casting up each example, to know its total, I begin at the right hand, or units rank, of the first example, and say 2 and 4 is 6, and 2 is 8, and 8 is 16, and 6 is 22, and 4 is 26; in which row there are two tens and 6 over; wherefore I set down 6 just under its own rank, and carry 2 to the next or last row, and say 2 that I carried and 4 makes 6, and 2 is 8, and 8 is 16, and 6 is 22, and 4 is 26, and 2 is 28; and it being the last row, I set down the amount, viz 28; So that the total number of yards is found to be (by the method) at the bottom 286. And the next, or second example, is found by the same method to be 3562 gallons. And in the third and last example, the total number of pounds is found to be 247484. and so the total of any other example of the same kind, viz. simple numbers of one denomination, may be found. Note, that when any of the ranks amount to just 10, 20, 30, 40, 50, &c. the

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tens th
ways
cond o
what i
or carr
or rank

Obse
shilling
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comes t

hundred

d.

20 }

30 }

40 }

50 }

60 }

70 }

80 }

90 }

100 }

110 }

120 }

you must set down the 0, under its proper rank, and carry either 1, 2, 3, 4, or 5, according to the number of tens that you find, to the next row; and so you must always do, when it so happens, whether in the first, second or third row, or in any other except the last, where what it amounts to must be set down without any reserve or carriage in the mind; because there is no other row or rank to carry to, as was hinted before.

Addition of Mixed Numbers.

Observe, 4 farthings make 1 penny, 12 pence make 1 shilling, 20 shillings make 1 pound sterling.

Libra in Latin signifying a pound, *l.* therefore stands for pounds.

Solidus in Latin signifying a shilling, *s.* therefore stands for shillings.

Denarius in Latin signifying a penny, *d.* therefore stands for pence.

Quadrans in Latin, signifying a farthing, *q.* therefore stands for farthings.

Observe, that pounds be set directly under pounds, shillings under shillings, pence under pence, and farthings under farthings.

But before you proceed, get this table of pence by heart thus, 30*d.* is half-a-crown, then 60*d.* is 5*s.* again 90*d.* is 7*s.* 6*d.* then 120*d.* is 10*s.* 8*d.* again 150*d.* is 12*s.* 6*d.* then 180*d.* is 15*s.* 4*d.* &c. 100*lb.* of cheese at 3*d.* the *lb.* comes to three times 8*s.* 4*d.* or 100 faggots, 120 to the hundred, at 1*d.* a-piece, comes to 10*s.* in the table.

<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>l.</i>	<i>s.</i>
20	1	8	30	1	10
30	2	6	40	2	00
40	3	4	50	2	10
50	4	2	60	3	00
60	5	0	70	3	10
70	5	10	80	4	00
80	6	8	90	4	10
90	7	6	100	5	00
100	8	4	110	5	10
110	9	2	120	6	00
120	10	0	130	6	10

Then for every crown that a hundred of faggots cost, reckon an half-penny; if the faggot costs me three half-pence, one hundred will cost 15s. because there is three crowns in it.

Note, That young men may improve themselves very much in reckoning up divers things, after they have by heart the table aforesaid, and learning this rule of addition.

An hundred yards of tape at one penny the yard, the table tells you comes to 8s. 4d.

An hundred yards of ferreting at one penny half-penny the yard.

In the table 100d. is	-	-	-	8s.	4d.
And half the sum is	-	-	-	4s.	2d.

Answer 12s. 6d.

If one pound of any thing costs 7d. halfpenny, what will 280 lb. weight cost after that rate; performed by addition thus,

	l.	s.	d.
200 sixpences makes 100s.	-	5	-
80 sixpences make	-	2	-
200 pence	-	-	16 8
80 pence is a noble, or	-	-	6 8
200 half-pence is 100 pence, or	-	-	8 4
80 halfpence make 10 groats, or	-	-	3 4

Price of the goods 8 15 0

Note, Now you have by heart the table of pence, you may cast up any sum of money without dotting, for when you know the number of pence, you may by this table, know how many shillings to carry to the shillings place, and for the number of shillings in the row of shillings you know that 70s. is 3l. 10s.

(16) (20) (12) 12 set over the pence, shews that
 l. s. d. for every 12 I find in the pence row
 17 16. 1 I am to carry 1 to the shillings; for
 20 11. 7. so many 20s. as I find in the shillings
 23 18. 9. row, 1 to the place of pounds as a
 73 17 10 foresaid.

But the easiest way of casting up this sum (for the young learner) is by using dots, thus =

136	4	3
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ARITHMETIC.

91.

Beginning at the pence; I say 10d. and 9d. is 19d. where against the 9 I set a dot for 12d. (or you may make your dots on waste paper) and what is more or above 12 I carry to the next figure, viz. 7, and it makes 14. where I set a dot also for 12, and carry the remaining 2 to the 1. on the top, which makes 3, which 3d. I set between the lines, as you see in the example.

Next, I look how many dots there are, and find 2, which I carry to the row of shillings, saying, 2 that I carry and 17 is 19, and 18 is 37, where against the 18 I set a dot for 20s. for 1l. and carry the odd 17s. upwards saying, 17s. I carry and 11 is 28, where I set a dot against the 11 for another 20s. and carry the remaining 8 to the 16 on the top, saying 8 I carry and 16 makes 24s where I set down a dot for 20s. and set between the lines the remaining 4s. under the row of shillings.

Note, That you may sum up the shillings row without dotting, thus; saying, 2s. that I carry from the place of pence, and 7 is 9, and 8 is 17, and 1 is 18, and 6 is 24, and 10 is 34, and 10 is 44, and 10 is 54, and 10 is 64, that is 3l. 4s. then the 4s. being set between the lines, the 2l. is to be carried to the pounds.

Lastly, The 3 dots for the 3l. found in the place of shillings, I carry to the pounds, saying, 3 that I carry and 3 is 6, and 3 is 9, and 7 on the top makes 16, the remaining 6 I set between the lines, under the first row of the pounds, and I carry 1 to the last row, saying, 1 that I carry, and 7 is 8, and 2 is 10, and 2 is 12, and 1 is 13, which being set between the lines, the whole sum comes to 136l. 4s. 3d.

Note, That when you are to write a bill of several small parcels, begin it in order of pounds, shillings, and pence, 0 - 3 - 9, and when you are to set down 16d. set down 1s. 4d. or to set down 23s. you must set 1l. 7. 0d.

If a man owes me the three following sums of money what come they to in whole?

l.	s.	d.	Note, That the $7\frac{1}{2}d.$ is seven pence
202	17	$7\frac{1}{2}$	halfpenny; and $1\frac{1}{4}d.$ is one penny
703	1	9	farthing; and in the total sum be-
906	10	$1\frac{1}{4}$	tween the lines $5\frac{1}{2}d.$ is five pence three

1812 9 $5\frac{1}{2}$

To call up the three sums I do thus, the $\frac{1}{4}$ which is the farthings, and the $\frac{1}{2}$ the halfpenny, make $\frac{3}{4}$ or three farthings, which is set between the lines; next $1d.$ and $9d.$ is $10d.$ and $7d.$ is $17d.$ where against the 7 is set a dot for $12d.$ and set the odd $5d.$ between the lines.

Next, 1 that I carry from the place of pence and $10s.$ is $11s.$ and 1 is $12s.$ and $17s.$ is $29s.$ I set down the remaining $9s.$ between the lines, and the $20s.$ making $14l.$ I carry to the place of pounds;

Saying, 1 that I carry and 6 is 7, and 3 is 10, and 2 is 12, where I set a dot for 10, and set the remaining 2 between the lines.

Next, I carry the dot for 10, as 1 to the middle row (being all cyphers) and proceed to the last row;

Saying, 9 and 7 is 16, and 2 at the top is 18, which I set between the lines, and the whole sum comes to 1812l. 9s. $5\frac{1}{2}d.$

Addition of Money.

Money owing and money received, as follows:

(1)				(2)					
Owing to	Mr	l.	s.	d.	Received from	Mr	l.	s.	d.
	Mr	4	12	6		Mr	46	10	9
	Mr	7	06	9		Mr	79	16	0
	Mr	4	12	0		Mr	42	18	3
	Mr	6	17	7		Mr	66	12	4
	Mr	5	06	6		Mr	90	16	0
	Mr	4	12	3		Mr	84	17	6
	Mr	6	00	0		Mr	24	12	0
	Mr	5	15	4		Mr	60	18	0
45 02 11				496 12 10					

ARITHMETIC.

93

I begin and say, 4 and 3 is 7, and 9 is 13, and 7 is 20, and 9 is 29, and 6 makes 35*d.* now 30*d.* according to the table, is 2*s.* 6*d.* and 5*d.* makes 2*s.* 11*d.* I set down 11 exactly under the rank of pence, and say, 2*s.* that I carry (which I do to the rank of shillings) and 5 is 7, and 2 is 9 (for I only take the unit rank of shillings) and 6 is 15, and 7 makes 22, and 2 is 24, and 6 is 30, and 2 makes 32; and now being come to the top of the sum, and it making 32, I come down with the tens of shillings, saying 32 and 10 is 42, and 10 is 52, and 10 is 62, and 10 is 72, and 10 makes 82*s.* and the table telling me that 80*s.* is 4*l.* I know therefore 82*s.* is 4*l.* 2*s.* wherefore I set down the remaining 2*s.* just under the row of shillings, and carry 4*l.* to the pounds, saying, 4 that I carry, and 5 is 9, and 6 is 15, and 4 is 19, and 5 is 24, and 6 is 30, and 4 is 34, and 7 is 41, and 4 is 45*l.* so that the total of these several sums of money due to those several persons, amounts to 45*l.* 2*s.* 11*d.* as in the example.

In the second example of money received, I begin at the right hand and say, 6 and 4 is 10, and 3 is 13, and 9 makes 22, and 22*d.* being 1*s.* 10*d.* I set down 10, and carry one to the shillings, saying, 1 that I carry and 2 is 3, and 7 is 10, and 6 is 16, and 2 is 18, and 8 is 26, and 6 makes 32; then I come down with the tens, saying, 32 and 10 makes 42, &c. and I find at the bottom it comes to 112*s.* which making 5*l.* 12*s.* I set down 12*s.* and carry 5*l.* to the pounds, saying, 5 that I carry and 4 is 9, &c. I find at the top it amounts to 36, wherefore I set down 6 exactly under its own rank, viz. the rank of units of pounds, and carry 3 for the tens that are in 30 (for at all times in the first denomination of addition, whether of money, weight, or measure; that is in the denomination of pounds, tens, or yards, you must cast them up as sums of one denomination; that is, for every ten carrying 1 to the next, &c.) saying, 3 that I carry, and 6 is 9, and 2 is 11, and 8 is 19, &c. and I find then at the top it comes to 49; wherefore I set down 49 before the 6, and the total amounts to 496*l.* 12*s.* 10*d.*

A Table of English Coins.

Of Gold.

		l.	s.	d.
A Jacobus,	} Value	0	5	0
A Carolus,		1	3	0
A Guinea,		1	1	0
A half Guinea,		0	10	6

Of Silver.

A Crown,	} Value	0	5	0
A half Crown,		0	2	6

The names of the rest speak their value, as a shilling, a sixpence, a groat, or 4d. a threepence, a twopence, a penny.

Of Copper.

A Halfpenny,

A Farthing.

Besides the above mentioned, we have still in use the names of some other pieces, which are now but imaginary, viz.

A Mark,	} Value	0	13	4
An Angel,		0	10	0
A Noble,		0	6	8

Of Troy weight.

The least fraction or denomination of weight used in England, is a grain of wheat gathered out of the middle of the ear, and well dried ; from whence are produced those following tables of weight, called Troy weight.

32 Grains of wheat	} make	24 Artificial grains
24 Artificial grains		1 Penny weight
20 Penny weight		1 Ounce
12 Ounces		1 Pound.

Troy w
actuaries
up the n
smiths
er parts,
minati
ing an e
ed care
mark a
h the d
ects of g
copper
mix their
making
this go
e to be
leave o
idered o
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of 12 ou
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the apoth
weight,
le of wh

And therefore,

lb.	oz.	pw.	grains.
1	12	20	24
1	22	240	5760
	1	20	480
		1	24

Troy weight serveth to weigh bread, gold, silver and
 Jewellers. It regulateth and prescribeth a form how to
 keep the money of England at a certain standard. The
 Goldsmiths have divided the ounce troy weight into o-
 ver parts, which they generally call mark weight. The
 denominative parts thereof are as followeth, viz. a mark
 (being an ounce troy) is divided into 24 equal parts,
 called carets, and each caret into 4 grains; so that
 a mark are 96 grains. By this weight they distin-
 guish the different firmness of their gold; for if to 22
 carets of gold be put 2 carets of alloy (which is of si-
 ver, copper, or other baser metal, with which they use
 to mix their gold or silver to abate the fineness thereof)
 in making when mixed but an ounce or 24 carets,
 this gold is said to be 22 carets fine; for if it
 were to be refined, the 2 carets of alloy will fly away,
 and leave only 22 carets of pure gold: the like to be
 considered of a greater or lesser quantity. And as the
 fineness of the gold is estimated by carets, so the fine-
 ness of silver is distinguished by ounces; for if a pound
 were pure, and loseth nothing in refining, such silver
 would be 12 ounces fine; but if it loseth any thing,
 it is said to contain so much fineness as the loss want-
 eth of 12 ounces; as if it lost 1 ounce 14 penny weight,
 it is said to be 10 ounces 6 penny weight fine, and
 if it loseth 2 ounces 4 penny weight 16 grains, is
 said to be 9 ounces 15 penny weight 8 grains fine, &c.
 The like to be understood of a greater or less quantity.

Of apothecaries weight.

The apothecaries have their weights deduced from
 the troy weight, a pound of troy being the greatest integer;
 the whole of whose division and subdivision followeth, viz.

I

And therefore,

			lb.	oz.	sc.	dr.
12 Ounces	} make	1 Pound	1—12—	8—	3—	—
8 Drams		1 Ounce	—	—	—	—
3 Scruples		1 Dram	1—12—	96—	288—	576—
20 Grains		1 Scruple	—	1—	8—	24—
					1—	3—
						1—

Thus much concerning troy weight, and its derivative weights, which, as was said before, serveth weight bread, gold, silver, and electuaries. Now, besides troy weight, there is another kind of weight used in England, commonly known by the name of avoirdupois weight (1 pound of which is equal to 14 ounces, penny weight troy weight): and it serveth to weigh kind of grocery wares, as also butter, cheese, flesh, wax, tallow, rosin, pitch, lead, and all such kind of garb, the table of which weight is as followeth.

4 Quarters of a dram	} make	1 Dram
16 Drams		1 Ounce
16 Ounces		1 Pound
28 Pounds		1 Quarter of a hundred
4 Quarters		1 Hund. wt. or 112
20 Hundred		1 Tun

Tun.	C.	qrs.	lb.	oz.	dr.
1—	20—	4—	28—	16—	16—
1—	20—	80—	2240—	25846—	573440—
	1—	4—	112—	1792—	28673—
		1—	28—	448—	7168—
			1—	16—	256—
				1—	16—
					1—

Wool is weighed with this weight, but only the fissions are not the same, a table whereof followeth.

A table of the denominative parts of wool weight.

7 Pounds	}	make	1 Clove
2 Cloves			1 Stone
2 Stones			1 Todd
6 Todd 1 stone			1 Way
2 Weys			1 Sack
12 Sacks			1 Laft

Laft.	sack.	wey.	todd.	stone.	clove.	lb.
1	12	2	6 $\frac{1}{2}$	2	2	7
1	12	24	156	12	624	4368
	1	2	13	26	52	364
		1	6 $\frac{1}{2}$	13	26	182
			1	2	4	28
				1	2	14
					1	7

Note, that in some counties the wey is 256 lb. avoirdupois, as the Suffolk wey; but in Essex, there is 336 in a wey.

The least denominative part of liquid measure is a gill, which was formerly taken from troy weight (1 ounce of wheat, troy weight, making a pint of liquid measure); but in regard of the difference between the brewers and farmers of his majesty's excise, concerning the gauging of vessels, occasioned by the different opinions of artificers concerning the solid inches in a gallon, it was lately decided by act of parliament; the statute now making 282 solid inches in a beer gallon, and 231 in a wine gallon; and consequently the pint beer measure contain $35\frac{1}{4}$ solid inches, and the pint wine measure contain $28\frac{7}{8}$ cubical or solid inches. From whence drawn the following table.

A table of liquid measure.

35 $\frac{1}{2}$ Cubical inches	}	make	1 Pint beer measure
28 $\frac{1}{8}$ Cubical inches			1 Pint wine measure
2 Pints			1 Quart
2 Quarts			1 Pottle
2 Pottles			1 Gallon
8 Gallons			1 Firkin of ale, soap herring
9 Gallons			1 Firkin of beer
10 Gallons and a half			1 Firk. of salmon or
2 Firkins			1 Kilderkin
2 Kilderkins			1 Barrel
42 Gallons			1 Tierce of wine
63 Gallons			1 Hogshead
2 Hogsheads			1 Pipe or butt
2 Pipes or butts			1 Tun of wine

And therefore,

Tuns.	pipes.	hhds.	gall.	pints.
1	2	2	63	8
1	2	4	252	2016
	1	2	126	1008
		1	63	504
			1	8

The least denominative part of dry measure is all pint, and this is likewise taken from troy weight: table of whose division followeth.

The table of dry measure.

1 Pound troy	}	make	1 Pint
2 Pints			1 Quart
2 Quarts			1 Pottle
2 Pottles			1 Gallon
2 Gallons			1 Peck
4 Pecks			1 Bushel
4 Bushels			1 Comb
2 Combs			1 Quarter
4 Quarters			1 Chaldron
5 Quarters			1 Wey
2 Weys			1 Last

And therefore,

last. wey. qrs. com. buf. pecks. gall. pints.

1—2— 5—2—4—4—2— 8

1—2—10— 20— 80—320—640—5120

1— 5— 10— 40—160—320—2560

1—2—8— 32— 64— 512

1—4— 16— 32— 256

1—4—8—64

1—2—16

1— 8

The least denominative of long measure is a barley-corn well dried, and taken out of the middle of the ear; whose table of parts followeth.

Barley corns	}	make	1 Inch
Inches			1 Foot
Feet			1 Yard
Feet, 9 inches, or a yard and a quarter			1 Ell English
6 Feet			1 Fathom
Yards and a half			1 Pole, perch or rood
Poles or perches			1 Furlong
Furlongs			1 English mile

And therefore,

mile. furl. poles yards. feet. inches. barley corns.

—8—40—5 $\frac{1}{2}$ —3— 12— 3

—8—320—1760—5280—63360—190080

1— 40— 220— 660— 7920— 23760

1— 5 $\frac{1}{2}$ — 16 $\frac{1}{2}$ — 198— 594

1— 3— 36— 108

1— 12— 36

1— 3

And note, that the yard, as well as the ell is usually divided into 4 quarters, and each quarter into 4 nails. Note also that a geometrical pace is 5 feet, and there are 1056 such paces in an English mile.

The parts of the superficial measure of land, are such as are mentioned in the following table, viz.

A table of land measure.

40 Square poles or perches	} make	{	1 Rood or quarter of an acre
4 Roods			1 Acre.

By the foregoing table of long measure, you are informed what a pole, or, which is all one, a perch, is; and by this, that 40 square perches is a rood. Now, a square perch is a superficies very aptly resembled by a square trencher, every side thereof being a perch of 5 yards in length, 40 of them is a rood, and 4 roods an acre; so that a superficies that is 40 perches long and broad is an acre of land, the acre containing in all 160 square perches.

The least denominative part of time is 1 minute, the greatest integer being 1 year, from whence is produced this following table.

Table of time.

60 Minutes	} make	{	1 Hour
24 Hours			1 Day natural
7 Days			1 Week
4 Weeks			1 Month
12 Months, 1 day, 6 hours			1 Year

But the year is usually divided into 12 unequal calendar months; whose names, and the number of days they contain follow, viz.

Days.	
January	31
February	28
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31
365	

So that the year containeth 365 days and 6 hours, but the 6 hours are not reckoned, but only every 4th year, and then there is a day added to the latter end of February, and then it containeth 29 days, and that year is called leap year, and containeth 366 days.

And here note, that as the hour is divided into 60 minutes, so each minute is subdivided into 60 seconds, and each second into 60 thirds, and each third into 60 fourths, &c.

The tropical year, by the exactest observation of the most accurate astronomers, is found to be 365 days, 5 hours, 49 minutes, 4 seconds, and 21 thirds.

The following example will make this rule plain to the learner. Thus these following sums being given to be added, viz. 136*l.* 13*s.* 4*d.* 2*qrs.* and 79*l.* 7*s.* 10*d.* 2*qrs.* and 33*l.* 18*s.* 9*d.* 1*qr.* and also 15*l.* 9*s.* 5*d.* 0*qrs.* the numbers being disposed according to order will stand as in the margin. Then begin at

the denomination of farthings, and add them up; saying 1 and 3 are 4, and 2 makes 6. Now, I consider that 6 farthings; are 1 penny and 2 farthings; wherefore I set down the 2 farthings in its place under the line, and keep 1 in mind

<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>qrs.</i>
136	13	4	2
79	7	10	3
33	18	9	1
15	9	5	0
265	9	5	2

to be added to the next denomination of pence. Then I go on, saying. 1 that I carried and 5 are 6, and 9 are 15, and 10 are 25, and 4 are 29. Now I consider, that 29 pence are 2 shillings and 5 pence; therefore I set the 5 pence in order under the line, and keep 2 in mind for 2 shillings, to be added to the shillings. Then I go on, saying, 2 that I carried and 9 are 11, and 18 are 29, and 7 are 36, and 13 are 49. Then I consider that 49 shillings are 2 pounds and 9 shillings; wherefore I set the 9 shillings under the line, and carry 2 for the 2 pounds to the next and last denomination of pounds; and proceed, saying 2 that I carry and 5 makes 7, and three are 10, and 9 are 19, and 6 are 25. Then I set down 5, and carry 2 for the 2 tens, and proceed; saying, 2 that I carried and 1 is 3, and 3 are 6, and 7 are 13, and 3 makes 16. And I set down 6, and carry 1 for the 10, and go on; saying, 1 that I carried and 1 are 2; which I set in its place under the line, and the work is finished. And thus I find the sum of the foresaid numbers to be 265*l.* 9*s.* 5*d.* 2*qrs.* This the ingenious practitioner is sufficient. But I shall not the further illuminating of the weaker apprehensions,

explain the operation of another example in troy weight. And here the learner must take notice of the table of troy weight mentioned before. The numbers given in this example are, 38 *lb.* 7 *oz.* 13 *pw.* 18 *gr.* and 50 *lb.* 10 *oz.* 10 *pw.* 12 *gr.* and 42 *lb.* 8 *oz.* 5 *pw.* 16 *gr.* And in order to the addition thereof, I place them as you see, and proceed to operation; saying, 16 and 12 are 28, and 18 are 46. Now, because 24 grains make 1 penny weight, 46 grains are 1 penny weight, and 22 grains; wherefore I set down 22, and carry 1 for the penny weight: and going on, I say, 1 that I carry and 5 are 6, and 10 are 16, and 13 are 29; which is 1 ounce and 9 penny weight. I set down 9 in its place under the line, and carry one to the ounces; saying, 1 that I carry and 8 are 9, and 10 are 19, and 7 are 26. And because 26 ounces make 2 pounds, 2 ounces, I set down 2 for the ounces, and carry 2 to the pounds going on, 2 that I carry and 2 are 4, and 8 makes 12; that is 2 and go 1: then 1 I carry and 4 are 5, and 5 are 10, and 3 makes 13; which I set down as in the margin, and the work is finished: and I find the sum of the said numbers to amount to 132 *lb.* 2 *oz.* 9 *pw.* 22 *gr.* This is sufficient for the understanding the following examples, or any other that shall come to thy view. The way of proving these, or any sum in this rule, is shewed immediately after the ensuing examples.

Addition of troy weight.

<i>lb.</i>	<i>oz.</i>	<i>pw.</i>	<i>gr.</i>	<i>lb.</i>	<i>oz.</i>	<i>pw.</i>	<i>gr.</i>
15	7	13	12	145	9	12	18
18	6	4	20	726	8	14	10
11	10	16	18	389	7	6	13
9	4	10	22	83	10	16	20
19	11	18	4	130	0	10	12
22	0	0	0	74	7	18	0
97	5	4	4	1550	8	19	1

lb.
48
74
64
17
34

240

Tuns.

45
15
38
12
21

133

Chald.

48
13
54
16
40

173

Addition of Apothecaries weight.

lb.	oz.	dr.	sc.	gr.	lb.	oz.	dr.	sc.	gr.
48	7	1	0	14	60	3	4	0	10
74	5	5	2	10	48	10	6	0	14
64	10	7	1	11	34	8	2	1	15
17	8	1	0	16	18	11	2	2	11
34	9	6	1	9	160	7	1	2	15
					35	2	5	1	7
240	5	6	1	0					
					358	7	7	0	12

Addition of avoirdupois weight.

Tuns	C.	qrs.	lb.	lb.	oz.	dr.
75	13	1	15	36	10	12
48	7	3	21	22	11	13
60	11	1	17	11	7	4
21	7	0	25	15	4	10
12	16	0	11	20	10	9
218	17	0	5	106	13	0

Addition of liquid measure.

Tuns.	pipes.	hds.	gall.	Tuns.	hds.	gall.	pints.
45	1	1	48	39	3	40	4
15	0	1	17	12	0	28	6
38	0	0	47	47	5	60	5
12	1	0	56	57	3	22	3
21	1	1	18	17	0	0	0
133	0	1	60	168	1	26	2

Addition of dry measure.

Chald.	qrs.	bush.	pec.	Qrs.	bush.	pec.	gall.
48	3	7	3	17	3	1	1
13	1	4	0	50	1	3	0
54	0	6	2	14	5	3	1
16	3	6	1	40	2	0	1
40	1	0	1	30	0	3	0
173	3	0	3	152	5	3	4

ARITHMETIC.

Addition of long measure.

Yards	qrs.	nails.	Ells	qrs.	nails
35	3	3	57	1	3
74	1	2	13	3	2
74	2	3	48	2	1
38	0	1	50	1	0
30	1	0	74	0	2
15	0	0	17	1	0
208	1	1	260	0	0

Addition of land measure.

Acres	roods	perches	Acres	roods	perches
12	3	18	86	1	36
14	0	24	47	3	24
30	2	19	73	2	18
48	3	30	60	0	7
28	1	38	4	2	8
50	3	26	14	1	14
185	3	35	286	3	27

The proof of addition.

Addition is proved after this manner. When you have found out the sum of the number given, then separate the uppermost line from the rest with a stroke or dash of the pen, and then add them all up again as you did before, leaving out the uppermost line; and having so done, add the new invented sum to the uppermost line you separated; and if the sum of those two lines be equal to the sum first found out,

then the work was performed true, otherways not. As for example: let us prove the first example of addition of money, whose sum we found to be 265 *l* 9*s* 5*d* 2*grs*, and which we prove thus. Having separated the uppermost number from the rest by a line, as you see in the margin; then add the same together again, leaving out the said uppermost line, and the sum thereof I set under the first sum

<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>grs.</i>
136	13	4	2
79	7	10	3
33	18	9	1
15	9	5	0
265	9	5	2
128	16	1	0
265	9	5	2

or true sum, which doth amount to 128 *l.* 16 *s.* 10 *d.* 0 *grs.* then again I add this new sum to the uppermost line that before was separated from the rest, and the sum of those two is 265 *l.* 9 *s.* 5 *d.* 2 *grs.* the same with the first sum; and therefore I conclude that the operation was rightly performed.

The main end of addition in questions resolvable thereby, is to know the sum of several debts, parcels, integers, &c. Some questions may be these that follow.

Quest. 1. There was an old man whose age was required. To which he replied, I have seven sons, each having two years between the birth of each other; and in the 44th year of my age my eldest son was born, which is now the age of my youngest. I demand, What was the old man's age?

Now, to resolve this question, first set down
 the father's age at the birth of the first child, which 44
 was 44; then the difference between the oldest 44
 and the youngest, which is 12 years; and then —
 the age of the youngest, which is 44; and then 100
 add them all together; and their sum is 100, the
 compleat age of the father.

Quest. 2. A man lent his friend at several times these several sums, viz. at one time 63 *l.* at another time 50 *l.* at another time 48 *l.* at another time 156 *l.* Now, I desire to know how much he lent him in all?

Set the sums lent under one another as you see
 in the margin; and then add them together, and
 you will find the sum to amount to 317 *l.* which is
 the total of all the several sums lent, and so much
 is due to the creditor.

 317

Quest. 3. From London to Ware is 20 miles, thence to Huntingdon 29 miles, thence to Stamford 21 miles, thence to Tuxford 36 miles, thence to Wentbridge 25 miles, from thence to York 20 miles. Now I desire to know how many miles it is from London to York, according to this reckoning?

Now to answer this question, set down the several distances given, as you see in the margin; and add them together, and you will find their sum to amount to 151; which is the true distance in miles between London and York.

Quest: 4. There are two numbers, the least whereof is 40, and the difference 14. I desire to know what is the greater number, and also what is the sum of both? First set down the least, viz. 40, and 14 the difference; and add them together, and the sum is 54. Greatest for the greater number. Then I set 40 (the least) under 54, (the greatest,) and add them together, and their sum is 94, equal to the greatest and least numbers.

Of subtraction of whole numbers.

Subtraction is the taking of a lesser number out of a greater of like kind, whereby to find out a 3d number, being or declaring the inequality, excess or difference between the numbers given. Or, subtraction is that by which one number is taken out of another number given, to the end that the residue or remainder may be known; which remainder is also called the rest, remainder or difference of the numbers given.

2. The number out of which subtraction is to be made, must be greater, or at least equal with the other number given. The higher or superior number is called the major number; and the lower or inferior is called the minor number; and the operation of subtraction being finished, the rest or remainder is called the difference of the numbers given.

3. In subtraction, place the numbers given respectively the one under the other, in such sort as like degrees, places, or denominations may stand in the same series viz. units under units, tens under tens, pounds under pounds, &c. feet under feet, and parts under parts,

20
29
21
36
25
20
151

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cc. This being done, draw a line underneath, as in addition.

4 Having placed the numbers given as is before directed, and drawn a line under them, subtract the lower number (which in this case must always be less than the uppermost) out of the higher number, and subscribe the difference or remainder respectively below the line; and when the work is finished, the number below the line, will give you the remainder.

As for example: let 364521 be given to be subtracted from 795836. I set the lesser under the greater, as in the margin, and draw a line under them; then beginning at the right hand, I say, 1 out of 6 and there remains 5, which I set in order under the line. Then I proceed to the next, saying 2 from 3 rests 1, which I note also under the line. And thus I go on till I have finished the work. And then I find the remainder or difference to be 431315.

795836

364521

431315

5. But if it so happen, as commonly it doth, that the lowermost number or figure is greater than the uppermost; then, in this case, add 10 to the uppermost number, and subtract the said lowermost number from their sum, and the remainder place under the line; and when you go to the next figure below, pay an unit, by adding thereto for the 10 you borrowed before, and subtract that from the higher number of figures. And thus go on till your subtraction be finished. As for example: let 53827 be given, from whence it is required to subtract 37503. I dispose of the numbers as is before directed, and as you see in the margin; then I begin, saying, 7 from 3 I cannot, but, adding 10 thereto, I say, from 13, and there remains 6; which I set under the line in order. Then I proceed to the next figure, saying 1 that I borrowed and 3 is 4 from 7, and there remains 3. Then 5 from 3 I cannot, but 3 from 10, and there remains 7; which I likewise set down as before. Then 1 that I borrowed and 8 is 9 from 5 I cannot, but 9 from 15, and there remains 6. Then 1 borrowed and 3 is 4 from 7, and there remains 3. Then 5 from 3 I cannot but 5 from 13, and there remains 8. Then 1 I borrowed and 1 are 2 from 4, and

437503

153827

283676

there rests 2. And thus the work is finished. And after these numbers are subtracted from one another, the inequality, remainder, excess, or difference, is found to be 283676. Examples for thy further experience may be these that follow.

From 3469916
Take 738642

Rests 2731274

From 361576
Take 5864

Rests 355712

6. If the sum or number to be subtracted is of several denominations, place the lesser sum below the greater, and in the same rank and order as is shewed in addition of the same numbers. Then begin at the right hand; and take the lower number out of the uppermost, if it be lesser; but if it be bigger than the uppermost, then borrow an unit from the next greater denomination, and turn into the parts of the less denomination, and add those parts to the uppermost, noting the remainder below the line. Then proceed, and pay one to the next denomination for that which you borrowed before; and proceed in this order, until the work be finished. An example of this rule may be this that followeth. Let 375 *l* 13 *s* 7 *d* 1 *qr* be given, from whence let it be required to subtract 57 *l* 16 *s* 3 *d* 2 *qrs*. In order whereunto I place the numbers as you see in the margin. And thus I begin at the least denomination, saying, 2 from 1 I cannot, therefore I borrow 1 penny from the next denomination, and turn it into farthings, which is 4; and adding 4 to 1, which is 5, I say, 2 from 5, and there remains 3; which I put under the line. Then going on, I say, 1 that I borrowed and 3 is 4 from 7, and there rests 3. Then going on, I say, 16 from 13 I cannot, but borrowing 1 pound, and turning it into 20 shillings, I add it to 13, and that is 33; wherefore I say, 16 from 33, and there remains 17, which I set under the line; and go on, saying 1 that I borrowed and 7 is 8 from 5 I cannot, but 8 from 37 and there remains 7; the 1 that I borrowed and 5 is

<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>qr.</i>
375	13	7	1
57	16	3	2
317	17	3	

ARITHMETIC.

III

From 7, there rests 1, and 0 from 3 rests 3. And I find the remainder or difference to be 317^l 17^s 3^d 39^{grs}.

An example of troy weight may be this. I would subtract 17^{lb} 10^{oz} 11^{pw} 20^{gr} from 24^{lb} 5^{oz} 0^{pw} 8^{gr}. I place the numbers ac-

According to the rule; and begin, say-
 ing 20 from 8 I cannot, but borrow
 1 penny weight, which is 24 grains,
 and add them to 8, and then are 32,
 wherefore I say, 20 from 32 rests
 12. Then 1 that I borrowed and 11

is 12 from 0 I cannot, but 12 from 20, borrowing an ounce, which is 20 penny weight, and there remains 8.
 Then 1 that I borrowed and 10 is 11 from 5 I cannot, but 11 from 17, and there rests 6. Then 1 that I borrowed and 7 is 8 from 4 I cannot, but 8 from 14, and there rests 6. Then 1 that I borrowed and 1 is 2 from 2, and there rests nothing. So that I find the remainder or difference to be 6^{lb} 6^{oz} 8^{pw} 12^{gr}.

7. It many times happeneth, that you have many sums or numbers to be subtracted from one number; as suppose a man should lend his friend a certain sum of money, and his friend hath paid him part of his debt at several times. Then before you can conveniently know what is still owing, you are to add the several numbers or sums of payments together, and subtract their sum from the whole debt, and the remainder is the sum due to the creditor. As suppose A lendeth to

B 564^l 16^s 10^d and

B hath repaid him 79^l

16^s 8^d at one time,

and 163^l 18^s 11^d at

another time, and 24^l

5^s 8^d at another

time; and you would

know how the accompt

standeth between them,

or what more is due to

A. In order whereun-

to I first set down the

sum which A lent, and draw a line underneath it;

then under that line I set the several sums of payment

	<i>l</i>	<i>s</i>	<i>d</i>
Lent	564	16	10
Paid at several payments	{ 79	16	8
	{ 163	18	11
	{ 241	15	8
Paid in all	485	11	3
Remains	79	5	7

as you see in the margin : and having brought the several sums of payment into one total, I find their sum amounteth to 485/ 11s 3d, which I subtract from the sum first lent by A, and I find the remainder to be 79/ 5s 7d, and so much is still due to A.

When the learner hath good knowledge of what hath been already delivered, he will with ease understand the following examples

Subtraction of money.

	l.	s.	d.	l	s	d	qrs
Borrowed	374	10	3	700	10	11	1
Paid	97	15	11	9	3	11	2
Remains	276	14	4	691	6	11	3
Borrowed	1000	0	0	711	3	0	0
Paid	29	6	0	11	13	0	1
Remains due	980	13	9	699	9	11	3
Borrowed	-	-	-	3300	0	0	0
Paid at several payments				170	10	0	0
				360	13	10	1
				590	3	14	3
				74	4	21	3
Paid in all				1195	13	0	3
Remains due				2104	6	11	1

Subtraction of troy weight.

	lb	oz	dr	gr
Bought	174	0	13	0
Sold	78	4	16	15
Remains	95	7	16	9

ARITHMETIC.

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	lb	oz	dr	gr
Bought	470	10	1	0
Sold at several times	60	0	0	0
	35	10	18	0
	16	7	9	8
	48	4	0	0
	61	11	19	23
	23	0	0	0
Sold in all	245	10	7	7
Remains unfold	224	11	13	17

Subtraction of apothecaries weight.

	lb	oz	dr	sc	gr	lb	oz	dr	sc	gr
Bought	12	4	3	0	0	20	0	1	0	7
Sold	8	5	1	1	15	10	0	1	2	12
Remains	3	11	1	4	5	9	11	7	0	15

Subtraction of avoirdupois weight.

	C	qrs	lb	T	C	qrs	lb	oz	dr
Bought	35	0	15	5	7	1	10	10	5
Sold	16	2	20	3	17	1	16	9	13
Remains	18	1	23	1	9	3	22	0	8

Subtraction of liquid measure.

	Tuns	hhds	gall	Tuns	hhds	gall	pints
Bought	40	1	30	60	3	42	4
Sold	16	1	40	15	0	46	6
Rem.	23	3	53	44	2	58	6

Subtraction of dry measure.

	Chal	qrs	bush	pec	Chal	qrs	bush	pec
Bought	100	0	0	0	73	2	3	2
Sold	54	1	4	3	46	2	3	3
Rem.	45	2	3	1	26	2	7	3

Subtraction of long measure.

	Yards	qrs	nails		Yards	qrs	nails
Bt.	160	0	0		344	0	1
Sold	95	1	2		177	0	3
Rem.	64	2	2		166	3	2

Subtraction of land measure.

	Acres	roods	perch		Acres	roods	perch
Bt.	140	2	13		600	0	0
Sold	70	3	12		54	0	16
Remains	69	3	2		545	3	24

Proof of subtraction.

Sums in this rule are easily proved, by adding the remainders to their lesser numbers; which (if right) will make the greater.

Multiplication

MULTIPLICATION.

Multiplication may be accounted the most serviceable rule in arithmetic; it performeth the work of many additions in the most compendious manner; brings numbers of great denominations into small, as pounds into shillings, pence, or farthings; tons into hundreds, quarters, pounds, or ounces, &c. and by knowing the value of one thing, we find the value of many.

In multiplication observe these three terms, multiplicand, multiplier, product.

1. The multiplicand (generally the greater of the two numbers) is the number to be multiplied.

2. The multiplier (generally the lesser of the two numbers) is the number to be multiplied with.

3. The product, is the result of the work, or the answer to the question. But before any thing can be done

What
Answer
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to the purpose, it is necessary to learn the following table perfect by heart.

The multiplication Table.

3 times	{	3	9
		4	12
		5	15
		6	18
		7	21
		8	24
		9	27

4 times	{	4	16
		5	20
		6	24
		7	28
		8	32
		9	36

5 times	{	5	25
		6	30
		7	35
		8	40
		9	45

6 times	{	6	36
		7	42
		8	48
		9	54

7 times	{	7	49
		8	56
		9	63

8 times	{	8	64
		9	72

9 times		9	81
---------	--	---	----

12 times	{	2	24
		3	36
		4	48
		5	60
		6	72
		7	84
		8	96
		9	108
		10	120
		11	132
		12	144

What is the amount of 3 times 654?

Answer, If you set the number 654, 3 times down on paper, one over another, the total will be 1962.

But such questions are done by this rule of multiplication much readier, for being set down thus:

654 Multiplicand
3 Multiplier

Now to know how much 3 times 654 is, begin thus, saying, 3 times 4 is 12, the figure 2 of 12, set below

the line, and bear the 10 of the 12 in mind, as 17; next, 3 times 5 is 15, and the 1 bore in mind, makes 16, so I set 6 below the line, and bear the ten in mind as one; next, I say, 3 times 6 is 18 and 1 bore in mind makes 19, which I set down, and the work will stand as in the margin.

How many is 3 times 472? Set the figures down as in the margin; then say 3 times 2 is 6, which place under the 2 in the multiplicand; then 3 times 7 is 21: set down 1 under 7, and carry 2. for 2 tens, as in addition of one denomination; then 3 times 4 is 12, and 2 is 14, which I set down, and the product is 1416, that is 3 times 472 makes so much; and may be proved by addition, by setting down 472 three times in additional order, and casting it up, which makes the assertion good in the second definition, that this rule compendiously performs the office of addition. Likewise the foregoing examples agree with the first definition; for as 3 times 472 makes 1416 so doth 472 times 3 make the same number.

Examples. Again, How many makes 742 multiplied by 4?

742 Multiplicand	}	Here I say, 4 times 2 is 8, and 4 times 4 is 16; 6 and carry 1; and 4 times 7 is 28, and 2 is 29, which I set down; so the whole product is 2968, as per example.
4 Multiplier		
2968 Product		

More examples of one figure in the multiplier, are these, viz.

Multiplicand	7420	4444	7468	90704	56789
	5	6	7	8	9
Product	37100	26664	52276	725632	511101

In compound multiplication.

When the multiplier consists of more figures than one, you must begin with that figure which is in the place of

units of the multiplier, and go thro' the whole multiplicand, by multiplying each figure of it first by that unit figure, and then by the next, to wit, by the figure in the place of tens in the multiplier, then with the third, &c. to the last; always remembering to place the first figure of every product or line (for you will ever have as many as you have significant figures in the multiplier) exactly and perpendicularly under the figure you multiply by, and then add the several lines or products together which so collected, gives the total product required, as in the examples following, viz.

Example.

How many is, or are, 23 times 7426? First, begin with the unit figure 3 in the multiplier, saying, 3 times 6 is 18; 8 (which I set directly under 3, by which I multiply) and carry 1, then 3 times 2 is 6, and 1 is 7; then 3 times 12, 2 and carry 1, then 3 times 7 is 21 and 1 is 22. And so I have done with the first figure of the multiplier, viz. 3. Then I go to the next, that is 2, and say, twice 6 is 12, 2 and carry 1 (which 2 is placed in a direct line under 2 the multiplying figure) then twice 2 is 4 and 1 is 5, then twice 4 is 8, and lastly twice 7 is 14, which I set down, and I add the two products together, saying, 8 is 8, &c. and the total is the right and proper product or result of the multiplication, viz. 170798.

$$\begin{array}{r}
 7426 \\
 23 \\
 \hline
 22278 \\
 14852 \\
 \hline
 170798
 \end{array}$$

527535	275827
15728	19725
4220280	1379135
1055070	551654
692745	1930789
37675	2482443
7535	275827
97070480	5440687575

When cyphers are intermixt with figures in the multiplier then multiply by the figures as above; and when you come to a cypher in the multiplier, then set down another cypher exactly and perpendicularly under it: then begin the multiplicand again with the next figure to the cypher in the multiplier, and go through it in the same line, placing the first figure of that product next to the cypher towards the left hand, but then heed must be taken, that the next figure or cypher of the new line must be set down one degree farther towards the left-hand, and not immediately under the last figure set down next to the cypher: as in the following example may be fully understood,

$$\begin{array}{r} 24393 \\ 402 \\ \hline \end{array}$$

$$\begin{array}{r} 87486 \\ 975720 \\ \hline \end{array}$$

$$9805986$$

$$\begin{array}{r} 7864371 \\ 23604 \\ \hline \end{array}$$

$$\begin{array}{r} 31457484 \\ 471862260 \\ \hline \end{array}$$

$$\begin{array}{r} 23593113 \\ 15728742 \\ \hline \end{array}$$

$$185630613084$$

$$\begin{array}{r} 327586 \\ 603 \\ \hline \end{array}$$

$$\begin{array}{r} 982758 \\ 19655160 \\ \hline \end{array}$$

$$197534358$$

When you have a cypher or cyphers in the multiplier, at the beginning towards the right hand; then set them backwards from the place of units towards the right hand, and when you have multiplied by the figure or figures, annex the cypher or cyphers:

As in these examples:

$$\begin{array}{r} 4762 \\ 70 \\ \hline \end{array}$$

$$333340$$

$$\begin{array}{r} 47962 \\ 400 \\ \hline \end{array}$$

$$19184800$$

$$\begin{array}{r} 4632 \\ 260 \\ \hline \end{array}$$

$$\begin{array}{r} 27792 \\ 9264 \\ \hline \end{array}$$

$$120432$$

If you have cyphers in the units place, &c. both the multiplicand and multiplier, then neglect the

ers in both, and multiply by the figures, and annex many cyphers to the total product as is the sum of the cyphers, both in multiplicand and multiplier.

As in these examples.

3600 220	42300 12000	376400 2400
852	846	15056
2	423	7528
72000	507600000	903360000

When you are to multiply by 10, 100, 1000, or 10000, it is only adding or annexing so many cyphers to the multiplicand, as is in the multiplier, that is, either 1, 2, 3, or 4 cyphers, and the work is done. Example, Suppose I am to multiply 375 by the numbers above, if I multiply it by 10, then I join 0 to 375, and then it makes, or the product is, 3750: if by 100, then I annex 00, and then it makes 37500: if by 1000, then I annex 000, and then it produces 375000: and lastly, if by 10000, I then add 0000, and then it makes 3750000, &c. and thus may any number be multiplied, when the multiplier consists of an unit with any number of cyphers.

Suppose you want to know how many half-crowns there are in 246*l*. you know that 8 half crowns make a pound, wherefore set them down thus:

246*l*.
Multiplied by 8 the half-crowns in a pound.
Answer 1968 the half crowns in all.

Again, In 1968 half crowns how many pence?
Multiply by 30 the pence in half a crown.
Answer 59040 pence in 1968 half crowns.

And this serves to make out, that great denominations are brought into smaller by this rule.

Admit you wanted to know the contents of a large table 34 feet long, and 4 feet wide.

Multiply 34 the length
By 4 the breadth, and the

Answer will be 136 square feet for the true contents of such a table.

Multiplication of money.

Multiplication of money (what most would learn above every thing) hath great affinity with addition of money, the same method being taken in carrying one denomination to the next, viz. from farthings to pence, from pence to shillings, and from shillings to pounds. And as in addition (and other multiplications) you begin at the right hand, and proceed towards the left; here you begin at the least denomination, which is also at the right hand.

This method of accounting is the most apt and expeditious of all others, for smaller quantities; and therefore extremely necessary in making bills of parcels, &c. And is beyond all contradiction, as sure and certain in any way whatsoever.

The general rule,

Is always to multiply the price by the quantity.

The first step is, for quantities from 2 to 12, and this is done by one multiplier, as in the following example.

Example 1. What must I give for 6 pieces of cloth if one cost 7*l.* 12*s.* 6*d.*?

l. *s.*
7 12

Multiply the price by

And the product is the answer, viz. 45 15

Here I say 6 times 6 is 36 pence, which is just 3s. I set down 0 in the place of pence, and carry 3s to the place of shillings, exactly the same as in addition of money; then 6 times 12 is 72, and 3 is 75s. or 3l. 15s. therefore I set down 15 in the place of shillings, and carry 3 to the pounds; then 6 times 7 is 42 and 3 is 45l. So the whole amount of the cloths, at 7l 12s 6d. per piece, is 45l. 15s. as in the work, and very concise.

Questions proper for this Rule.

Question 1. What is the contents of a square piece of ground, whose length is 28 perches, and breadth 13 perches?

Answer, 364 square perches: for multiplying 28 the length by 13 the breadth, the product is so much.

Question 2. There is a square battle, whose flank is 30 men, and the files 19 deep; what number of men that battle contain? *Facit* 893: for multiplying 30 by 19, the product is 893.

Question 3. If any one thing cost 4 shillings, what will 9 things cost? Answer, 36 shillings: for multiplying 4 by 9, the product is 36.

Question 4. If a piece of money or merchandize be worth or cost 17 shillings, what shall 19 such pieces of money or merchandize cost? *Facit* 323 shillings, which is equal to 16l 3s.

Question 5. If a soldier or servant get or spend 14s. per month, what is the wages or charges of 49 soldiers or servants for the same time? Multiply 49 by 14, the product is 686s, or 34l 6s for the answer.

Question 6. If in a day there are 24 hours, how many hours are there in a year, accounting 365 days to constitute the year? *Facit* 8760 hours: to which if you add the 6 hours over and above 365 days, as there is in a year, then it will be 8766 hours. Now, if you multiply this 8766 by 60 you have the number of minutes in a year.

Division of whole numbers.

1 Division is the separating or parting of any number or quantity given, into any parts assigned; or to find how often one number is contained in another; or from any two numbers given, to find a third that shall consist of so many units, as the one of those two given numbers is comprehended or contained in the other.

2. Division hath three parts or numbers remarkable viz. first, the dividend; secondly, the divisor; thirdly, the quotient. The dividend is the number given to be parted or divided. The divisor is the number given by which the dividend is divided; or it is the number which sheweth how many parts the dividend is to be divided into. And the quotient is the number produced by the division of the two given numbers, the one by the other.

So 12 being given to be divided by 3, or into three equal parts, the quotient will be 4, for three is contained in 12 four times; where 12 is the dividend, and 3 the divisor, and 4 is the quotient.

3. In division set down your dividend, and draw a crooked line at each end of it; and before the line on the left hand place the divisor, and behind that on the right hand place the figures of the quotient, as in the margin; where it is required to 3) 12 divide 12 by 3. First, I set down 12 the dividend, and on each side of it do I draw a crooked line, and before that on the left hand do I place 3 the divisor. Then do I seek how often 3 is contained in 12 and because I find it 4 times, I put 4 behind the crooked line on the right hand of the dividend, denoting the quotient.

4. But if when the divisor is a single figure, the dividend consisteth of two or more places; then, have placed them for the work, as is before directed, put a point under the first figure on the left hand of the dividend, provided it be bigger than, or equal to the divisor; or; but if it be less than the divisor, then put a point under the second figure from the left hand of the dividend, which figures, as far as the point goeth from the

and, are to be reckoned by themselves, as if they had no dependence upon the other part of the dividend; and, for distinction's sake, may be called the *dividual*. Then ask how often the divisor is contained in the *dividual*, placing the answer in the quotient. Then multiply the divisor by the figure that you placed in the quotient, and set the product thereof under your *dividual*. Then draw a line under the product, and subtract the said product from the *dividual*, placing the remainder under the said line. Then put a point under the next figure in the dividend on the right hand of that to which you put the point before, and draw it down, placing it on the right hand of the remainder which you found by subtraction, which remainder, with the said figure annexed to it, shall be a new *dividual*. Then seek again how often the divisor is contained in this new *dividual*, and put the answer in the quotient on the right hand of the figure which you put there before. Then multiply the divisor by the last figure that you put in the quotient, and subscribe the product under the *dividual*, and make subtraction, and to the remainder draw down the next figure from the grand dividend, (having first put a point under it,) and put it on the right hand of the remainder as a new *dividual*, as before, &c. and proceed thus till the work is finished.

Observe this general rule in all kinds of division.

First, To seek how often the divisor is contained in the *dividual*. Then, having put the answer in the quotient, multiply the divisor thereby, and subtract the product from the *dividual*. An example or two will make the rule plain. Let it be required to divide 2184 by 6: suppose the numbers given as is before directed, and as we see in the margin, in order to the work.

Because 6 the divisor is more than 6)2184(3 the first figure of the dividend, I put a point under 1 the second figure, which makes 21 the *dividual*. Then do I ask how often 6 the divisor is contained in 21, and because I cannot have it more than 3 times, I put 3 in the quotient, and thereby do I multiply the divisor (6) and the product is 18, which I set in under the *dividual*, and subtract it there-

from, and the remainder (3) I place in order under the line, as you see in the margin.

Then do I make a point under the next figure of the dividend, being 8, and draw it down, annexing it to the remainder 3; so I have 38 for a new dividend. Then do I seek how often 6 is contained in 38; and because I cannot have it more than 6 times, I put 6 in the quotient; and thereby do I multiply the divisor (6) and the product (36) I put under the dividend (38), and subtract it therefrom, and the remainder (2) I put under the line, as you see in the margin.

$$\begin{array}{r} 6) 2184 (36 \\ \underline{00} \\ 18 \\ \underline{00} \\ 38 \\ \underline{00} \\ 36 \\ \underline{00} \\ 2 \end{array}$$

Then do I put a point under the next (and last) figure of the dividend, (being 4), and draw it down to the remainder (4); and putting it on the right hand thereof, it maketh 24 for a new dividend. Then I seek how often 6 is contained in 24: and the answer is 4, which I put in the quotient, and multiply the divisor (6) thereby, and the product (24) I put under the dividend (24), and subtract it therefrom, and the remainder is 0. And thus the work is finished; and I find the quotient to be 364; that is, 6 is contained in 2184 just 364 times, or 2184 being divided into 6 equal parts, 364 is one of those parts.

$$\begin{array}{r} 6) 2184 (364 \\ \underline{00} \\ 18 \\ \underline{00} \\ 38 \\ \underline{00} \\ 36 \\ \underline{00} \\ 24 \\ \underline{00} \\ 24 \\ \underline{00} \\ 0 \end{array}$$

Again, if it were required to divide 2646 by 7, or into 7 equal parts, the quotient will be found to be 378; as appeareth by the operation on the margin.

$$\begin{array}{r} 7) 2646 (378 \\ \underline{00} \\ 21 \\ \underline{00} \\ 54 \\ \underline{00} \\ 49 \\ \underline{00} \\ 66 \\ \underline{00} \\ 64 \\ \underline{00} \\ 24 \\ \underline{00} \\ 24 \\ \underline{00} \\ 0 \end{array}$$

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73164

72

14
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24

(0)

ARITHMETIC.

125

So if it were required to divide 946 by 8 the quotient will be found to be 118, and 2 remaining after division is ended. The work appeareth on the margin.

$$\begin{array}{r} 8 \overline{) 946} \quad (118 \\ \underline{8} \\ 14 \\ \underline{8} \\ 66 \\ \underline{64} \\ (2) \end{array}$$

Many times the dividend cannot be exactly divided by the divisor, but something will remain; as in the last example, where 946 was given to be divided by 8, the quotient was 118, and there remaineth 2 after the division is ended. Now what is to be done in this case with the remainder, the learner shall be taught when we come to treat of the reducing (or reduction) of fractions.

And here note, that if, after your division is ended, any thing do remain, it must be less than your divisor, or otherwise your work is not rightly performed.

Other examples are as follow.

$$73164 \overline{) 9183}$$

72

14
8

66
64

24
24

(0)

$$913758 \overline{) 1528}$$

9

47
45

25
18

78
72

(6)

5. But if the divisor consisteth of more places than one, then chuse so many figures from the left side of the dividend for a dividual, as there are figures in the divisor and put a point under the farthest figure of that dividual to the right hand, and seek how often the first figure on the left side of the divisor is contain'd in the first figure on the left side of the dividual, and place the answer in the quotient, and thereby multiply your divisor placing your product under your dividual, and subtract it therefrom, placing the remainder below the line. Then put a point under the next figure in the dividend and draw it down to the said remainder and annex it on the right side thereof, which makes a new dividual; and proceed as before, till the work is finished.

And if it so happen, that, after you have chosen your first dividual as is before directed, you find it to be less than the divisor; then put a point under the figure nearest to the right hand, and seek how often the first figure on the left side of the divisor is contained in the two first figures on the left side of the dividual, and place the answer in the quotient, by which multiply the divisor, and place the product thereof in order under the dividual, and subtract it therefrom, and then proceed as before.

Always remembering, that in all cases of division, after you have multiplied your divisor by the figure first placed in the quotient, the product be greater than the dividual, then you must cancel that figure in the quotient, and, instead thereof, put a figure less by an unit (or one) and multiply the divisor thereby: and if the product be greater than the dividual, make the figure in the quotient less by an unit. And thus do, until your product be less than the dividual, or at the most equal thereto, and then make subtraction, &c.

So, if you would divide 9464 by 24, the quotient will be found to be 394. I first put down the given number, as is before directed in the third rule. Now, because my divisor consisteth of two figures, I therefore put a point under my second figure from the left hand of my dividend, which is 4; wherefore I seek how often 2 (the first fi-

24)9464

72

22

figure on the left side of the divisor is contain'd in 9 (the first figure in the dividend) the answer is 4; which I put in the quotient, and thereby multiply all the divisor, and find the product to be 96, which is greater than the dividend; wherefore I cancel the 4 in the quotient, and, instead thereof, I put 3 (an unit less) and by it multiply the divisor 24, and the product is 72; which I subtract from 94 the dividend, and the remainder is 22. Then do I make a point under the next figure 6 in the dividend, and draw it down, and place it on the right side of the remainder 22, and it makes 226 for a new dividend, now, because the dividend 226 consisteth of a figure more than the divisor, therefore I seek how often 2 (the figure of the divisor) is contained in 22, the two first of the dividend: I say 9 times: wherefore I put 9 in the quotient, and thereby multiply the divisor 24; the product (216) I place under the dividend 226, and subtract from it, and there remaineth 10.

$$24) 9464 (39$$

72

226

216

10

Then I go on, and make a point under the next and last figure (4) in the dividend, and draw it down to the remainder 10, and it makes 104 for a new dividend: which is also a figure more than the divisor: and therefore I seek how often 2 is contained in 10: I answer 5 times. But multiplying my divisor by 5, the product is 120; which is greater than the dividend: and therefore I make it 4; and by it multiply the divisor, and the product is 96, which being placed under, and subtracted from the dividend, there remaineth 8. And thus the whole work of division is finished; and I find, that 9464 being divided by 24, or into 24 equal parts, is found to be 394, as was said before, and the remainder is 8; as you see in the work in the margin.

$$24) 9464 (394$$

72

226

216

104

96

(8)

Another example may be this. Let there be required the quotient of 1183653 divided by 385. First I dispose of the numbers in order to their dividing; and be-

cause 118, the three first figures of the dividend, is less than the divisor 385, I therefore make a point under the fourth figure which is 3, and see how often 3 (the first figure of the divisor) is contained in 11: the answer is 3. which I put in the quotient, and thereby multiply the divisor 385, and the product is 1155, which I subtract from the dividend 1183, and there remains 28. Then, as before, draw down the next figure, which is 6, and place it before the remainder 28: so have I 286 for a new dividend: and because it hath no more figures than the divisor, I seek how often 3 (the first figure in the divisor) is contained in 2 (the first figure of the dividend) and the answer is 0; for a greater number cannot be contained in a lesser; wherefore I put 0 in the quotient: and thereby (according to the 5th rule) I should multiply my divisor; but if I do, the product will be 0; and 0 subtracted from the dividend 286, the remainder is the same.

$$\begin{array}{r} 385 \overline{) 1183653} \\ \underline{1155} \\ 28 \end{array}$$

Wherefore I draw down the next figure (5) from the dividend, and put it before the said remainder 286: so have I 2865 for a new dividend; and because it consisteth of four places, viz. a place more than the divisor, I seek how often 3 (the first figure of the divisor) is contained in 28 (the two first of the dividend) and I say there is 9 times three in 28; but multiplying the whole divisor (385) thereby, I find the product to be 3465, which is greater than the dividend 2865: wherefore I chuse 8, which is less by an unit than 9; and thereby I multiply the divisor 385, and the product is 3080, which is still greater than the said dividend: wherefore I chuse another number yet an unit less, viz. 7, and having multiplied my divisor thereby, the product is 2695; which is less than the dividend 2865; wherefore I put 7 in the quotient, and subtract 2695 from the

$$\begin{array}{r} 385 \overline{) 1183653} \\ \underline{1155} \\ 286 \end{array}$$

Wherefore I draw down the next figure (5) from the dividend, and put it before the said remainder 286: so have I 2865 for a new dividend; and because it consisteth of four places, viz. a place more than the divisor, I seek how often 3 (the first figure of the divisor) is contained in 28 (the two first of the dividend) and I say there is 9 times three in 28; but multiplying the whole divisor (385) thereby, I find the product to be 3465, which is greater than the dividend 2865: wherefore I chuse 8, which is less by an unit than 9; and thereby I multiply the divisor 385, and the product is 3080, which is still greater than the said dividend: wherefore I chuse another number yet an unit less, viz. 7, and having multiplied my divisor thereby, the product is 2695; which is less than the dividend 2865; wherefore I put 7 in the quotient, and subtract 2695 from the

$$\begin{array}{r} 385 \overline{) 1183653} \\ \underline{1155} \\ 2865 \\ \underline{2695} \\ 170 \end{array}$$

there is 9 times three in 28; but multiplying the whole divisor (385) thereby, I find the product to be 3465, which is greater than the dividend 2865: wherefore I chuse 8, which is less by an unit than 9; and thereby I multiply the divisor 385, and the product is 3080, which is still greater than the said dividend: wherefore I chuse another number yet an unit less, viz. 7, and having multiplied my divisor thereby, the product is 2695; which is less than the dividend 2865; wherefore I put 7 in the quotient, and subtract 2695 from the

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dual, an
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27986)

Rema

dividual 2865, and there remains 385) 1183653(3074
 170. Then I draw down the last figure (3) in the dividend, and place it before the said remainder 170, and it makes 1703 for a new dividual. Then (for the reason above said) I seek how often 3 is contained in 17: the answer is 5, by multiplying the divisor thereby, the product is 1925 greater than the dividual, wherefore I say it will bear 4, an unit less, and

$$\begin{array}{r} 1155 \\ \hline 2865 \\ 2695 \\ \hline 1703 \\ 1540 \\ \hline (163) \end{array}$$

by it I multiply the divisor 385, and the product is 1540, which is less than the dividual, and therefore I put 4 in the quotient, and subtract the said product from the dividual, and there remaineth 163. And thus the work is finished, and I find that 1183653 being divided by 385, or in 385 equal shares or parts, the quotient or one of those parts, is 3074, and besides there is 163 remaining.

And thus the learner being well versed in the method of the foregoing examples, may be sufficiently qualified for the division of any greater sum or number, into as many parts as he pleaseth, that is, he may understand the method of dividing by a divisor that consisteth of 4, 5, or 6, or any greater number of places, the method being the same with the foregoing examples in every respect.

Other examples in division.

$$27986)835684790(29860 \quad 196374)473986018(2413$$

$$\begin{array}{r} 55972 \\ \hline \end{array}$$

$$\begin{array}{r} 275964 \\ 251874 \\ \hline \end{array}$$

$$\begin{array}{r} 240907 \\ 223888 \\ \hline \end{array}$$

$$\begin{array}{r} 170199 \\ 167916 \\ \hline \end{array}$$

Remains 22830

$$\begin{array}{r} 392748 \\ \hline \end{array}$$

$$\begin{array}{r} 812380 \\ 785496 \\ \hline \end{array}$$

$$\begin{array}{r} 268841 \\ 196374 \\ \hline \end{array}$$

$$\begin{array}{r} 724678 \\ 589122 \\ \hline \end{array}$$

Remains 135556

So if you divide 47386473 by 58736, you will find the quotient to be 806, and 45257 will remain after the work is ended.

In like manner, if you would divide 3846739204 by 483064, the quotient will be 7963, and the remainder after division will be 100572.

When the divisor is 3, 4, 5, 6, or more figures, there is a sure and easy way of performing the work truly, by making a table of the divisor, which may be done by addition, or multiplying the divisor by 2, 3, 4, &c.

Admit you are to divide 987654321 by 123456

$$\begin{array}{r}
 123456 \overline{) 987654321} \quad (3000 \\
 \underline{987648} \\
 6321
 \end{array}$$

Here having noted the number of figures in the divisor, which here is six, I make a point under the several figure, or place of the dividend, &c.

1	<u>123456</u>
2	<u>246912</u>
3	<u>370368</u>
4	<u>493824</u>
5	<u>617280</u>
6	<u>740736</u>
7	<u>864192</u>
8	<u>987648</u>
9	1111104

This table is made by doubling the first line, which is 246912, which added to the first or uppermost line, gives the third line 370368, which also added to the first line makes 493824 for the fourth line or product, and so of the rest, still remembering to add the subsequent line, till you come to the last line of 9 times, which is 1111104. The truth of which may be proved by multiplying the first or uppermost line by 2, 3, 4, 5, &c. and if you commit an error by addition it may be found out, or corrected by multiplication.

When
to the d
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(3dly.)
ne single

The use of the said table.

When you have pointed out your number of places in the dividend, cast your eye on the table, and at the first view you may know how many times you can take, as in this example, 7 times is too little, and 9 times too much, wherefore I set down 8 in the quotient, and then multiply and subtract, and the remainder is 6, to which I bring down 3, and put 0 in the quotient, then to the 6 I bring down 2, and place another 0 in the quotient, then to 632 I bring down 1 the last figure in the dividend, but still it will not bear any time or times, wherefore I put another 0 in the quotient, and so the work is done, and the quotient is 8000, and the remainder 321. as in the work.

Abbreviations.

(1st.) If there are any cyphers on the right hand of your divisor, you may cut off so many cyphers, or figures, on the right hand of your dividend, but remember to bring them down (if figures) to the remainder.

Example,

$$\begin{array}{r}
 21 \overline{) 1008645129} (411 \\
 \underline{84} \\
 24 \\
 \underline{21} \\
 35 \\
 \underline{21} \\
 1429
 \end{array}$$

(2dly.) By the foregoing rule you may observe, that to divide by 10, 100, 1000, &c. is only to cut so many figures from the right hand of the dividend, as there are cyphers in the divisor.

Example.

$$1000 \overline{) 436821735}$$

So the quotient is 43682, the remainder 735.

(3dly.) When your divisor is 12, or consists only of one single figure, or can be reduced to one by cutting

off cyphers from its right hand, the work may be easily performed in one line, thus :

Rule.

Drawing a line under the dividend, set down under its first figure, how often the divisor is contained in it, what remains imagine placed before the next figure, and, considering how often your divisor is contained in the sum it makes, set down the number underneath before, and so proceed through all the figures, set down what remains at last, in the place where your quotient is used to stand.

Examples.

$$\begin{array}{r} 4 \overline{)93645} \\ \underline{23411} \end{array}$$

$$\begin{array}{r} 12 \overline{)83675} \\ \underline{6972} \end{array}$$

$$\begin{array}{r} 7100 \overline{)563515} \\ \underline{805} \end{array}$$

If you are to divide several numbers by one common divisor (as in the calculating of tables, &c.) that you may know exactly at once how often your divisor will go, in some convenient corner make a table of your divisor, by multiplying it severally by all the nine digits thus, suppose 562 your divisor :

562	1
1124	2
1686	3
2248	4
2810	5
3372	6
3934	7
4496	8
5058	9

Proofs of division.

(1st.) Multiplication and division mutually prove each other : for as if you divide the product of a multiplication by the multiplier, the quotient will be the multiplicand : so if you multiply the quotient of a division by the divisor (taking in the remainder) the product will be the dividend.

(2dly.) Another proof of division is, by adding together those lines in the following example, marked with asterisks (being the particular products of the divisor, multiplied severally by each figure in the quotient, together with the remainder of the division) the total of which, if right, will be the dividend.

(3dly.) Division may also be proved as multiplication, by a cross, thus; casting out the nines from the divisor, and quotient, place the remainders on its right and left sides, then multiplying the two figures so placed together and casting the nines from the product, and what's left to be the remainder of the division, and still casting out the nines, let the overplus be placed at the top; then also casting the nines from the dividend, set down the figure remaining at the bottom, which if it agrees with that at the top, the work may be supposed right. See each proof the following

Example.

$ \begin{array}{r} 736)863256(\\ \underline{736*} \\ 1272 \\ \underline{736*} \\ 5365 \\ \underline{5152*} \\ 2136 \\ \underline{1472*} \\ 664* \end{array} $	$ \begin{array}{r} 1172 \\ \underline{736} \\ 7032 \\ \underline{3516} \\ 8204 \\ \underline{862592} \\ 664 \text{ Remainder} \\ \hline 863256 \text{ 1st Proof.} \end{array} $
--	---

863256 2d Proof.

REDUCTION.

Reduction is that which brings together two or more numbers of different denominations into one denomination; or it serveth to change or alter numbers, money, weight, measure, or time from one denomination to another; and likewise to abridge fractions to the lowest terms; all which it doth so precisely, that

the first proportion remaineth without the least jot of error or wrong committed: so that it belongeth as well to fractions as integers; of which in its proper place. Reduction is generally performed either by multiplication or division. From whence we may gather, That,

2. Reduction is either descending or ascending.

3. Reduction descending is, when it is required to reduce a sum or number, of a greater denomination into a lesser, which number, when it is so reduced, shall be equal in value to the number first given in the greater denomination: as if it were required to know how many shillings, pence, or farthings, are equal in value to a hundred pounds? or, how many ounces are contained in 45 hundred weight? or, how many days, hours, or minutes, there are in 240 years? &c. And this kind of reduction is generally performed by multiplication.

4. Reduction ascending is, when it is required to reduce or bring a sum or number of a smaller denomination into a greater, which shall be equivalent to the given number; as suppose it were required to find how many pence, shillings or pounds, are equal in value to 43785 farthings? or how many hundreds are equal to or in, 3748 pounds, &c. And this kind of reduction is always performed by division.

5. When any sum or number is given to be reduced into another denomination, you are to consider whether it ought to be resolved by the rule descending or ascending, viz. by multiplication, or division. If it be to be performed by multiplication, consider how many parts of the denomination into which you would reduce are contained in an unit or integer of the given number and multiply the said given number thereby, and the product thereof will be the answer to the question. As if the question were, In 38 pounds how many shillings? Here I consider, that in one pound are 20 shillings, and that the number of shillings in 38 pounds, will be 20 times 38: wherefore I multiply 38/. by 20, and the product is 760, and so many shillings are contained in 38/, as in the margin.

But when there is a denomination or denominations between the number given and the number required

you may, if you please, reduce it to the next inferior denomination, and then into the next lower than that, until you have brought it into the denomination required. As for

example; let it be demanded, In 132 pounds how many farthings?

First, I multiply 132 (the number of pounds given) by 20 to bring it into shillings, and it makes 2640 shillings. Then do I multiply the shillings 2640 by 12 to bring them into pence, and it produceth 31680. And so many pence are contained in 2640 shillings, or 132 pounds.

Then do I multiply the pence, viz. 31680 by 4, to bring them into farthings. (because 4 farthings is a

penny) and I find the product thereof to be 126720, and so many farthings are equal in value to 132 pounds. The work is manifest in the margin.

6. And if the number propounded to be reduced is to be divided, or wrought by the rule ascending, consider how many of the given numbers are equal to an unit or penny in that denomination to which you would reduce your given number, and make that your divisor,

and divide the given number your divisor; and the quotient thence arising will be the number sought or required. As for example; let it be required to reduce 2640 shillings into pounds. Here I consider that 20 shillings are equal to one pound; wherefore I divide

the given number, by 20, and the quotient is 132, and so many pounds are contained in 2640 shillings. In reduction descending

the learner is advised to take particular notice of

the tables delivered in the former part of this book, that he may be informed what multipliers or divisors he may make use of in the reducing of any number to any o-

132 pounds
20

2640 shillings

12

5280

2640

31680 pence

4

126720 farthings

210) 2640 (132

2

6

6

4

4

(0)

ther denomination whatsoever, especially English monies, weights, measures, time, and motion. But in this place it is not convenient to meddle with foreign coins, weights, or measures.

But if in reduction ascending it happen that there is denomination, or denominations between the number given and the number required, then you may reduce your number given into the next superior denomination, and when it is so required, bring it into the next above that, and so on, until you have brought it into the denomination required. As for example;

Let it be demanded, In 126720 farthings how many pounds? First I divide my given number, being farthings by 4, to bring them into pence, because 4 farthings make one penny; and there are 31680 pence. Then I divide 31680 pence by 12, and the quotient giveth 2640 shillings. And then I divide 2640 shillings by 20, and the quotient giveth 132 $\frac{1}{2}$ which are equal in value to 126720 farthings. See the work.

$ \begin{array}{r} 4 \overline{) 126720} \\ \underline{} \\ 12 \\ \underline{} \\ 6 \\ \underline{} \\ 4 \\ \underline{} \\ 27 \\ \underline{} \\ 24 \\ \underline{} \\ 32 \\ \underline{} \\ 32 \\ \underline{} \\ (0) \end{array} $	$ \begin{array}{r} 12 \overline{) 31680} \\ \underline{} \\ 24 \\ \underline{} \\ 76 \\ \underline{} \\ 72 \\ \underline{} \\ 48 \\ \underline{} \\ 48 \\ \underline{} \\ (0) \end{array} $	$ \begin{array}{r} 20 \overline{) 2640} \\ \underline{} \\ 2 \\ \underline{} \\ 6 \\ \underline{} \\ 6 \\ \underline{} \\ 4 \\ \underline{} \\ 4 \\ \underline{} \\ (0) \end{array} $
---	---	---

7. When the number given to be reduced, consisteth of divers denominations, as pounds, shillings, pence, farthings, or of hundreds, quarters, pounds, and ounces, &c. then you are to reduce the highest, or greatest denomination into the next inferior, and add thereto the number standing in that denomination, which you reduce the greatest or highest number is reduced to. Then reduce

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at sum into the next inferior denomination, adding hereto the number standing in that denomination. Do until you have brought the number given into the denomination proposed. As, if it were required to reduce 48*l.* 13*s.* 10*d.* to pence: first I bring 48*l.* into shillings, by multiplying it by 20, and the product is 960 shillings; to which I add the 13 shillings, and they make 973. Then multiply 973 by 12, to bring the shillings into pence, and they make 11676; to which I add the 10 pence, and they make 11686 pence for the answer. See the work done.

<i>l.</i>	<i>s.</i>	<i>d.</i>
48	13	10
	960	
	13	
	973	
	12	
	1946	
	10	
	11676	
	10	

Sum 11686 pence

8. If in reduction ascending, after division is ended, any thing remain, such remainder is of the same denomination with the dividend.

Example. In 4783 farthings, I demand how many pounds? View the following operation.

First, I divide the given number farthings, viz. 4783, by 4, to bring them into pence, and the quotient is 1195 pence, and there remaineth 3 after the work of division is ended, which is 3 pence.

	12)	210)	
4) 4783	(1195	(99	(4 pounds
....	..		
4	108	8	
7	115	19	shillings
4	108		
38			
36			
23			
20			

Rem. 7 pence

Facit 4 19 7 3

3 farthings remains.

into shillings, and the quotient is 99 shillings, and there is a remainder of 7, which is 7 pence.

And then divide 99 shillings (the last quotient) by 20, to bring it into pounds, and the quotient is 4*l.* and there remaineth 19 shillings; so that I conclude that in 4783 (the proposed number of farthings) there is 4*l.* 19*s.* 7*d.* 3*qrs.*

More examples in the reduction of coin.

Quest. In 438*l.* how many shillings? **Facit** 8760 shillings; for multiplying 438 by 20, the product amounteth to so much. See the work.

$$\begin{array}{r} 438 \text{ pounds} \\ 20 \\ \hline \text{Facit } 8760 \text{ shillings} \end{array}$$

Quest. In 467*l.* how many pence? First multiply the given number of pounds (467) by 20, to bring it into shillings; and it makes 9340 shillings, then multiply the shillings by 12, and it produceth 112080 pence, thus,

$$\begin{array}{r} 467 \text{ pounds} \\ 20 \\ \hline 9340 \text{ shillings} \\ 12 \\ \hline 1868 \\ 934 \\ \hline \text{Facit } 112080 \text{ pence} \end{array}$$

Or it may be resolved thus, viz. Multiply the given number of pounds (467) by (240) the number of pence in a pound, and the product is the same, viz. 112080 pence, as by the operation appeareth

$$\begin{array}{r} 467 \text{ pounds} \\ 240 \\ \hline 1868 \\ 934 \\ \hline \text{Facit } 112080 \end{array}$$

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Quest. In 5673 l. how many farthings? First multiply the given number by 20, to bring it into shillings, and it produceth 113460 shillings, then multiply that product by 12, to bring it into pence, and it produceth 1361520 pence, then, lastly, multiply the pence by 4, and it produceth 5446080 farthings. See the operation

5673 pounds
20

11346 shillings
12

22692
11346

1361520 pence
4

Facit 5446080 farthings

Or this question might have been thus resolved, viz. Multiply 5673. (the given number of pounds) by 960 (the number of farthings in a pound) and it produceth the same effect; as you see by the work.

5673 pounds
960

34038
51057

Facit 5446080

20 shillings
12

240 pence
4

960

Otherwise thus, First bring the given number 5673 into shillings, and multiply the shillings by 48, the number of farthings in a shilling, and the same effect is thereby likewise produced, viz.

5673 pounds
20

113460 shillings
48

90768
45384

Facit 5446080 farthings.

12 pence
4

48 farthings

These various ways of operation are expressed to inform the judgment of the learner with the reason of the rule. More ways may be shewn, but these are sufficient even for the meanest capacities.

Quest. In 458l. 16s. 7d. 3qrs. how many farthings? To resolve this question, consider the seventh rule, and work as you are there directed, and you will find the foresaid given numbers to amount to 440479 farthings, viz.

	l.	s.	d.	qrs.
	458	16	7	3
		20		
		9160		
Add		16	shillings	
Sum	9176	shillings		
		12		
		18352		
		9176		
		110112		
Add			7 pence	
Sum	110119	pence		
		4		
		440476		
Add			3 farthings	
Sum	440479	farthings		

This last question, or any other of this kind, viz. where the number given to be reduced consisteth of several denominations, may be much more concisely resolved this way, viz. When you multiply the pounds by 20, to bring them into shillings, to the product of the first figure add the figure standing in the place of units in the denomination of shillings: but because the first figure in the

	l.	s.	d.	qrs.
	458	16	7	3
		20		
		9176	shillings	
		12		
		18359		
		9176		
		110119	pence	
		4		
Facit	440479	farthings		

multiplier is 0, I say, 0 times 6 is nothing, but 6 is 6, which I put down for the first figure in the product. Then because the multiplier is 0, I go no further with it, for if I should, the whole product would be 0; but proceed. And when I come to multiply by the second figure in the multiplier, to the product of it I add the figure standing in the place of tens in the denomination of shillings, which is 1; saying, 2 times 8 is 16, and (the said figure) 17. Then I set down 7, and carry the unit to the product of the next figure, as has been directed before. So that now you may have the whole product and sum of shillings at one operation, which is the same as before. And when you multiply the shillings by 12, to bring them into pence, after the same manner, add to the product the number standing in the denomination of pence; and so when you multiply the pence by 4, to bring them into farthings, add to the product the number standing under the denomination of farthings. See the last question thus wrought on the margin of the preceding page.

Reduction of troy weight.

We now come to give the learner some examples in troy weight, wherein we shall be brief, having given so large a taste of reduction in the former examples of coin. And now the learner must be mindful of the table of troy weight delivered in addition.

Quest. In 482 lb. 7 oz. 13 pw. 21 gr. how many grains?

Multiply by 12, by 20, and by 24, taking in the figures standing in the several denominations, according to the directions, given formerly and you will find the product to be 2780013 grains, which is the number required, or answer to the question. See the whole work as followeth.

	I.	oz.	pw.	gr.
482	7	13	21	
12				

12

971
482

5791 ounces
20

115833 penny wt.
24

463333
231668

Facit 2780013

Quest. In 2780013 grains, I demand how many lb. oz. pw. gr.?

This is but the foregoing question inverted, and is resolved by dividing by 24, by 20, and by 12, and the answer is 482 lb. 7 oz. 13 pw, 21 gr.

24)2780013	210 (1158313	12 (5791	(482
24	10	48	
38	15	99	
34	14	96	
140	18	31	
120	18	24	
200	3		
192	2		
81			
72			

Rem. 7 ounces.

Rem. 13 penny weight.

93	lb.	oz.	pw.	gr.
72	Facit 482	7	13	21

Remains 21 grains.

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Reduction of avoirdupois weight.

In reducing of avoirdupois weight, the learner must have recourse to the table of avoirdupois weight delivered before.

Quest. In 47 C. 1 qr. 20 lb. How many ounces? Multiply by 4, by 28, and by 16, and the last product will be the answer, viz. 84992 ounces.

C. qr. lb.

47—1—20
4

189
28

1512
380

5312
16

32872
5312

Facit 84992 oz.

Quest. In 84992 ounces, I demand how many C. s. lb. and oz.?

This is the foregoing question inverted, and will be solved if you divide by 16, by 28, and by 4, and the answer is 47 C. 1 qr. 20 lb. equal to the given number the foregoing question.

84992 28) 4) C. qrs. lb. oz.
(5312 (189 (47 1 20 0

80	28	16	
49	251	29	
48	224	28	
19	272	1 qr.	
16	252		
32	20 pounds		
32			
(0)			

Reduction of liquid measure.

Quest. In 45 tuns of wine, how many gallons? Multiply by 4 and 63, the product is 11340 gallons for the answer.

$$\begin{array}{r}
 45 \\
 4 \\
 \hline
 180 \\
 63 \\
 \hline
 54 \\
 108 \\
 \hline
 \text{Facit } 11340
 \end{array}$$

Quest. In 34 rundlets of wine, each containing 18 gallons, I demand how many hogheads?

First, find how many gallons are in the 34 rundlets which you may do if you multiply 34 by 18, the content of a rundlet, and the product is 612 gallons, which you may reduce into hogheads, if you divide them by 63, and the quote will be 9 hogheads, and 45 gallons. See the work.

$$\begin{array}{r}
 34 \\
 18 \\
 \hline
 272 \\
 34 \\
 \hline
 63)612(9\text{hhhd} \\
 567 \\
 \hline
 \text{Rem. } 45 \text{ gall.}
 \end{array}$$

Facit 9 hhds. 45 gall.

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Quest. In 12 tuns, how many rundlets of 14 gallons

Reduce your tuns into gallons, and divide them by the gallons in a rundlet, and the quotient, 216, is the answer. See the work.

$$\begin{array}{r}
 4 \\
 \hline
 48 \\
 63 \\
 \hline
 144 \\
 288 \\
 \hline
 14 \overline{) 3024} \quad (216 \text{ rundlets.})
 \end{array}$$

28

22

14

84

84

(0)

Facit 216 rundlets.

Reduction of long measure.

Quest. I demand how many furlongs, poles, inches, barley-corns will reach from London to York, it is accounted 151 miles.

N

1208 furlongs
8 furlongs in a mile

48320 poles
40 poles in a furlong

11 half yards in a pole

4832
4832

531520 half yards
18 inches in a half yard

425216

531520

9567360 inches
3 barley corns in an inch

28702080 Answer.

Quest. The circumference of the earth (as all circles are) is divided into 360 degrees, and each degree into 60 minutes, which, upon the superficies of earth, are equal to 60 miles; now I demand how many miles, furlongs, perches, yards, feet, and barley corns will reach round the globe of the earth?

Ans. I demand how many furlongs, poles, inches, barley-corns will reach from London to York, it is accounted 121 miles.

Quest. In
pies, how

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360 degrees

60 minutes or miles in a degree

21600 miles about the earth

8 furlongs in a mile

172800 furlongs about the earth

40 perches in a furlong

6912000 poles or perches about the earth

11 half yards in a perch

6912

6912

2) 76032000 half yards about the earth

(38016000 yards, viz. the half yards divid-

3

by 2

114048000 feet about the earth

12

inches in a foot

228096

114048

1268576000 inches about the earth

12

barley corns in an inch

4105328000 barley corns

So many will reach round the world, the whole be-
21600 miles. So that if any person were to go
ed, and go 15 miles every day, he would go the
ole circumference in 1440 days, which is 3 years 11
ths and 15 days.

Reduction of Time.

Quest. In 28 years, 24 weeks, 4 days, 16 hours, 30
minutes, how many minutes?

Years, weeks, days, hours, minutes.

28 — 24 — 4 — 16 — 30

52 weeks in a year.

60

142

1480 weeks.

7

10364 days.

24

41462

20729

248752 hours.

14925150 minutes.

Note, That in resolving the last question after the method expressed, there are lost in every year 30 hours for the year consisteth of 365 day and 6 hours; but multiplying the year by 52 weeks, which is 364 days you lose one day and 6 hours every year. Wherefore to find an exact answer, bring the odd weeks, days and hours, into hours, and then multiply the year by the number of hours in a year, viz. 8766, and to the product add the hours contained in the odd time, and you have the exact time in hours; which bring into minutes as before. See the last question thus resolved.

Days, hours.

Weeks, days, hours.

28 — 24 — 4 — 16 — 30

8766 — 24 — 7 — 24 — 30

172 — 1466 — 172

172 — 730 — 24

197 — 8766 hours in a year — 694

228 — 345

249592 hours

60 — 4144

14975520 min. in 28 years, and 4144 hours.

4144

So you see, that, according to the method first used to resolve this question, the hours contained in the given time, are 248752, but according to the last, best, or truest method, they are 249592, which exceeds the former by 840 hours.

But for most occasions it will be sufficient to multiply the given years by 365, and to the product add the days of the odd time, if there be any; and then there will be only a loss of 6 hours in every year, which may be supplied by taking a fourth part of the given years, and adding to the contained days, and you have your desire.

The Golden Rule, or Rule of Three Direct
So called from its extraordinary usefulness, not only in arithmetical questions, but in all parts of the mathematics.

It is also called the rule of three, because there are always three numbers given to find out a fourth: and it is properly called the rule of proportion, because the first number bears such proportion to the second, as the third does to the fourth.

The design of this rule is, to shew how to find a fourth proportional number, by having three given numbers, which is deducible from the sixteenth proposition of the sixth book of Euclid's elements.

The Rule is,

Multiply the second and third numbers together, and divide the product by the first number, and the quotient hence arising is the fourth number sought. Or,

Divide the second number by the first, and multiply the quotient by the third, and the product is the number required: for the fourth number contains the third often as the second contains the first. And this is called direct proportion.

All questions in this rule of three consist of three numbers, whereof two are always of one kind or denomination. As in this example.

If I give 10s. for 5 yards, what shall I give for 15 yards at the same rate?

Now two of these are of the same kind, that is, the number 5 and 15, which are both yards, which place thus. The number concerning which the question is asked, must be in the third place.

Now in this question the 15 yards is the number, and the price of which the question requires the value, place it therefore in the third place.

Then seek out the other number of the same kind or denomination, which must be yards also, which in this question is 5; set this in the first place, and then the other number, that is 10s. will consequently claim the second place, and the answer to the question will be always of the same denomination with it, which here is shillings.

Now the question stated according to the foregoing rule stands thus,

If 5 yards cost 10s. what will 15 yards cost?

10s. 150 (30s. Answer.

150
00

Multiply the second number by the third, and divide the product by the first.

Note. That the three numbers are 5, 10, 15.

Proof of the last question.

What shall I pay for 5 yards, when 15 yards are for 30s.?

If 15 yards cost 30s. what will 5 yards cost?

30s. 10s. (20s. Answer.

10s.
00

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What is the interest of 75 pounds at the rate of 8% per annum?

The numbers will be stated thus,

L. P.	L. I.	L. P.
100	88	75

In this example there are two numbers that are principal money, and one that is interest, therefore the interest (according to the rule) must stand in the middle, or second place, the principal on which the interest dependeth, viz. 100/. (8 being the interest thereof) must stand in the first place towards the left hand, and the other principal on which the fourth number (which is the number sought for) dependeth, must possess the first place towards the right hand.

By these rules foregoing, you may with ease and certainty perform any operation in direct proportion, and for your further information take the examples following.

Example. If the interest of 100/. for one year be 8/. what is the interest of 75/. for the same time?

L. P.	L. I.	L. P.
100	8	75

100)6100(61. Answer.

Example. If 32 rundlets of brandy cost 96/. what will rundlets cost at that rate?

Run.	l.	Run.
32	96	4

32)384(12. Answer.

0 Remains

Example. If 12 bags of cotton wool cost £48, what will 17 bags cost?

Bags 1. Bags
 12 184 17
 1288 1 seed
 184 260 13 4 Answer

In this example there are two numbers that are prime to each other, and the number 100 is the product of these two numbers. Therefore the interest will be divided into two equal parts, and each part will be the interest of the principal. The interest of the principal will be the interest of the principal, and the interest of the principal will be the interest of the principal.

Note. That in the last example, when any thing remains that is reducible to a lower denomination, 'ter it is so reduced, it must be divided continually by the first number.

Cafe.] When any of the three given numbers happen to be of divers denominations,

Rule.] You may reduce them into the lowest denomination. And if your first number require to be reduced, your third must be reduced likewise into the same denomination as the first: for the first and the numbers before you begin your operation, must be ways of one name or denomination.

Exam
that wil

Note, 3
ird num
t, the c
nd num
ample)
DIV 10 20
Examp
ll 18 C

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Example. If 17 hogheads of sugar cost 320 l. 12 s. what will 5 of these hogheads be worth?

Hhds. l. s. hds.

17 320 12 5

6412 shillings } multiply
5 Hhds.

20 s. l s d q
17) 32060 (18815 (94 5 10 2 7

150 8

146 0 remains

100

15 shillings remain } multiply
12 pence in a shil.

180

15

17) 180 (10 pence

10 pence remain } multiply
4 farthings 1d.

17) 40 (2 farthings

6 farth. remain to be divided
by 17

Note. That when you have multiplied the second and third numbers together, and divided the product by the first, the quotient is of the same denomination as the second number is, after you have reduced it (as in the last example) into its lowest denomination given.

Example. If 4 C 1 qt 24 lb of sugar cost 14 l. what will 18 C cost?

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C qr lb
 24 1 24
 4
 42
 45

500 lb of sugar

2016 lb of sugar
 14 l. sterling

} multiply

8064
 2016

500 28 24 56 8 11 2 4 9

8 32

224 pounds remain
 20 shillings in 1 l.

} multiply

500 44 180 8 shillings

480 shillings rem.
 12 pence in 1 s.

} multiply

960
 480
 500 57 160

7 shillings remain to be divided

240 pence remain
 4 farthings 1 d.

} multiply

500 104 40 2 qrs

40 farthings remain to be divided by 500.

Cafe.]
 or that to
 tion is per
 no reducing
 Example
 what will o

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Note further, That what farthings remain, to be divided by the common divisor (as in the last example) because you can reduce them into no lower denomination, you may place them over your divisor, as fractions of a farthing, which shall be explained when we come to treat of vulgar fractions, &c.

Case.] When the first number of the three given, is not an unit, the operation is performed by multiplication only.

Example. If I give 15 s. for a pound of thread, what will 250 lb. cost at that rate?

lb s d

250 15 0

15

1250

250

3750 s. answer, or 187 l. 10 s.

Example. At 14 l. 10 s. 6 d. per bag of hops, what will 55 bags cost?

Bag l s d Bags

2 14 10 6 55

20

290 shillings

12

3486 pence

55 the 3d numb.

} multiply

17430

17430

198730 pence ans. or 798 l. 17 s. 6 d.

Case.] When the third number of the three given, or that towards the right hand, is an unit, such operation is performed by division only; if the number need no reducing.

Example. If 40 pieces of broad cloth cost 590 l. what will one piece cost?

Pieces 1. Piece
 140 590
 410 (590) 142 1/2, or 147 1/2. answer
 19
 20 pounds remain

If one bushel of rye cost 3s. 6d. what will a fall of 10 quarters cost after that rate?

First reduce the 3s 6d into pence, that is 42d and the 10 quarters into bushels, that is 80, and set the question thus :

If 1 bushel cost 42d. what will 80 cost ?

$$\begin{array}{r} 80 \\ \times 42 \\ \hline 160 \\ 3360 \end{array}$$

The first number or place being 1, will neither multiply nor divide, then bring the 3360d into shillings by dividing by 12 as followeth.

$$\begin{array}{r} 12 \overline{) 3360} \text{ (280 shillings)} \\ \underline{24} \\ 96 \\ \underline{96} \\ 0 \end{array} \quad \begin{array}{r} 20 \overline{) 2810} \text{ (141)} \\ \underline{20} \\ 80 \\ \underline{80} \\ 0 \end{array}$$

For the proof of this, and the like questions, reduce the answer into pence, to know whether your work be right, as appears in the work.

If I paid 432l. for 325 quarters of malt, what is the price of 1 quarter after that rate?

Which being stated stands thus;

525 quarters cost 432 l . what will 1 quarter cost?
In this question you cannot multiply the second num-
ber by the third, because the third number, or place, is
one.

Therefore to perform this question with ease, reduce
 l . into farthings by reduction, which makes 414720
farthings to be divided, which divide by 525, the quar-
ters of malt, and the quotient, the answer is 789 far-
things; the remainder after the division is ended are
the parts of a farthing.

lastly, The 789 farthings being reduced are 16 s .
Therefore, if 525 quarters of malt, or todcs of
or goods, be sold for 432 l . one quarter will cost
5 s 4 d . after that rate. Or, which is better, reduce
432 l . into shillings, and it gives 8640, which divide
by 525, and the quotient is 16, and the remainder 240,
which multiply by 12 the product is 2880, which divide
by 25, the quotient is 5 pence, and the remainder 255,
multiplied by 4, and the product 1020 divided as
before, gives 1 farthing, and $\frac{1020}{525}$ parts of another far-
thing.

A grocer bought 5 $\frac{1}{2}$ C. weight of nutmegs, which
cost him 163 l . 13 s . 8 d . how may he sell $\frac{1}{2}$ pound weight
without gain or loss?

Reduce the money into pence, it makes 39284 d . for
dividend, and 5 $\frac{1}{2}$ C. weight into pound weights by
division, makes 644 pound weight for the divisor;
divide the 39284 by 644, and the quotient gives
pence, the price of one pound, viz. 5 s . 1 d .

That what sum of money you desire to gain,
set to the price; and work as above, to know what
set by every single pound.

Use the yearly rent of 20 l . belonging to 7 landlords.

Reduce the 20 l . into farthings, and they are 19200,
divide by 7, the quotient gives 2724 $\frac{4}{7}$ farthings for
landlord, from which you may subtract the taxes.

the same rule you may draw a comparison of
for if a man owe to several creditors, as suppose
to in all 35 l . 16 s , reduce it into farthings, and
divide by the number of pounds owing, &c. - As,

Suppose a man leaveth 12l. To the first 3 12 2
to pay his debts; and he owes Second 4 06 8
one man 5l. the second 6l. and Third 5 01 1
the third 7l. which makes 18l.
what is each man's share? 13 00 0

If 28 quarters of barley cost 30l. 10s. 6d. tell me what
84 quarters come to at that rate?

28 qrs cost 30l. 10s. 6d. what will 84 qrs cost?

28 61 5384 (21978 pence
Shillings 610 56

12 210 18311-6

55 1226 28 1-11-6

610 273

Pence 7326 253

88 218

29304 126

58608

224

Sum 615384 224

(0)

84 qrs comes to 91l. 11s. 6d.

20

1831

12

3668

1831

21978

21978

21978

21978

21978

21978

21978

21978

21978

21978

21978

21978

21978

half into quarters, which make 14 for the second number, and the 21/10, 1-1/2, and it makes 20646 farthings; then multiply that by 14 and the product is 289044, to be divided by 2604, and the quotient gives 110 quarters of yards, to divide by 4 (the quarters in a yard) and the quotient is 27 yards 1/2, viz. 3 quarters, answer.

Thus stated being reduced.

Farthings Quarters Farthings

2604 15 20646

If one pound of iron cost 31/4 what will

7 C 3 qrs 17 lb cost?

31 qrs of an hundred

28 lbs in 1/4 of an C

— take in 17 lb

255

63

Pounds 885 in 7 C 3 qrs 17 lb

14 farthings to 3 1/2

3540

885

4) 12390 farthings answer

12) 3097 1/2

210) 2518 1

Answer 112 1/2

Note, That this example may serve for a rule to reduce hundreds, quarters, and pounds into pounds; but tradesmen set the weights in short, thus, 7—3—17 instead of setting them as above 7 C 3 qrs 17 lb. Besides this way of proof, of reducing the total to farthings again, is most necessary for young learners, in all of the questions in the rule of three.

The Indirect Rule of Three.

In the indirect rule of three, the numbers are in reciprocal proportion, that is, the fourth number found, is to bear the same ratio to the second as the third does to the first, but in an inverted order; that is, the greater the third term is in respect to the first, the less must the fourth be in respect to the second.

This rule differs in its operation, from the direct, that, after the question is stated, and the numbers of the statings prepared (as in the direct rule) your first and second must be multiplied together, and your third number be your divisor. The quotient, as before, will be the answer.

EXAMPLES.

Ex. 1. What number of men must be employed to finish in 12 days, what 43 men would be 35 days about

$$\begin{array}{r}
 \text{days} \quad \text{men} \quad \text{days} \\
 35 \quad \text{---} \quad 43 \quad \text{---} \quad 12 \\
 43 \\
 \hline
 105 \\
 140 \\
 \hline
 12)1505
 \end{array}$$

Answer, 125 men

Ex. 2. How many yards of stuff 3 qrs wide, will lay a room which requires 420 yards of 5 qrs wide?

$$\begin{array}{r}
 \text{qrs} \quad \text{yds} \quad \text{qrs} \\
 5 \quad 420 \quad 3 \\
 \hline
 3)2100
 \end{array}$$

Answer 700

The reason of this operation will appear plain (after what has been said in the direct rule) by considering the example. Now it is clear, that if of the stuff, being 3 qrs wide, there are 420 yards required, then if the stuff but 1 qr wide, 3 times 420 yards, viz. 1260 yards must be allowed; consequently, if the stuff 3 qrs wide, one third part of those yards will be sufficient: therefore 1260 divided by 3, will give the answer required, viz. 420 yards.

Now to know whether a question belongs to the direct or indirect rule of three,

Observe, If the third number, being more than the first number requires more, or, being less, requires less, is direct; but if the third number, being more, requires less, or being less, requires more, it is indirect.

Or, without any regard to the distinction of direct and indirect; if more is required, let the lesser of the two extremes be the divisor, if less, the greater.

More questions in the indirect rule of three.

If I lend A 136 £ for three months, how long must I keep 42 £ of his, to requite myself?

Answer, 9 months, 2 weeks, 6 days.

If 46 clerks in 32 days finish a piece of writing, in what time would 55 clerks accomplish the same?

Answer, 26 days, 9 hours, 9 minutes.

A garrison, consisting of 1539 men, being besieged, has provision only for 12 days; but it being necessary they should hold out three weeks, how many men must be sent out?

Answer 660 men.

The double Rule of Three.

Questions in this rule have five numbers proposed and are frequently answered by two statings; they may be performed by one, as shall be shewn here after.

EXAMPLES.

Ex. 1. The carriage of 32 hundred weight 56 miles comes to 12s. After the same rate, what must I pay to have 78 hundred carried 94 miles?

C	s	C	
32	12	78	
56	29	94	
12	3	8	
351	4	96	
1404	3159	5632994	589
280	12	598	
499	210	419	
448	Facit	21. 95. 1d.	
514			
504			
10			

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Note, The solution had been the same, if the miles had been made first and third numbers of the first stat- ing; and the C. weights the first and third numbers of the last.

Note also, This example may be done by one stat- ing, thus:

$$\begin{array}{r} \text{C} \quad \text{s} \quad \text{d} \\ \text{If } 32 \text{ --- } 12 \text{ --- } 78 \\ 56 \text{ miles} \quad 94 \text{ miles} \end{array}$$

$$\begin{array}{r} 192 \\ 160 \\ \hline 1792 \\ 7832 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 1792 \quad 87684 \quad 49 \quad 1 \\ 7168 \quad 1 \quad \text{s} \quad \text{d} \\ 16304 \quad 2 \quad 9 \quad 1 \\ 16128 \\ \hline 176 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 1792 \quad 2112 \quad 1 \\ 1792 \\ \hline 320 \end{array}$$

Ex. 2. How many men must be employed to reap 20 acres in 17 days, if there were required 37 men to reap 54 acres in 5 days?

The num- men
of days
which have
relation to
20 acres
37 men
54 acres
5 days

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Acres men acres
First, If 54 — 37 — 420

37

2940

1260

Days men days
Then, If 5 — 287 — 17 54) 15440 (287

108

17) 1435 (84

474

136

432

107

1001

75

420

88

378

51

Answer 84 men

42

Note, If you would work such questions of the double rule of three as have one of their proportions indirect, by one stating, you must multiply the third number of your stating by that number you would otherwise have placed under your first; and your first number by that you would have placed under your third, as in the following example.

Example.

Acres men acres

If 54 — 37 — 420
* 17 — 5 —

378

2100

54

37

918 77700
6300

* The num- — men

ber of days 918) 77700 (84 answer as before

which have 7344

relation to —

420 acres 4260

3672

588

The number of days which
have relation to the 54 acres

Of Exchange.

Having explained the nature of the Rule of three, and the manner of resolving questions therein, it naturally led to treat of its particular use in the exchange of coins.

In the exchange of coins, it is necessary that the par value of the money in each place be exactly known: for the word par signifies to equalize the money of exchange from one place with that of another place. As when I take up so much money per exchange in one place, to pay the just value thereof in another kind of money in another place, without having respect to the price current of exchange for the sake, but only to that the money does currently pass for in each place: from whence may be easily found but the profit and loss of all money drawn and remitted by exchange. At this par being grounded principally upon the current value of coin, the plenty and scarcity thereof, the rising and falling, intancement and debasing of the same, it must necessarily follow, that the value of coin is subject unto change. An example, whereof you have in France, where their coin has been changed, intanced and lowered several times in a few years; and in the year 1720, the French crown, which was sixty sous, or three livres, is now raised to seventy five sous, or three livres, fifteen sous.

The denomination in which England and the following places exchange with other are, viz.

The exchange of monies from London to Antwerp, Amsterdam, Hamburgh, Lisse, Middleburgh, and other parts of Flanders and Holland, is valued on the pound sterling of 20 shillings: that is, to pay after the rate of so many shillings and pence Flemish, for every pound sterling.

The exchange from London to Paris, Roan, and most parts of France, is valued on the French crown at 54*d*. that is, to pay so many pence, or so many shillings and pence sterling, for the French crown.

The exchange from London to Venice is made on the ducat at 52*d*. sterling, to pay so many pence and parts of a penny sterling for every ducat.

The exchange from London to Leghorn, Genoa, Calais, Madrid, and other parts of Spain, is made on the dollar or piece of eight, at 54d. sterling; that is, to pay so many pence or parts of a penny sterling for every dollar.

The par at Antwerp, Amsterdam, Hamburg, Middleburgh, and other parts of Flanders, with one pound sterling, is thirty three shillings four pence Flemish, for a pound sterling; which thirty three shillings four pence do make 10 guilders at two shillings sterling the guilder, or 10 livres Tournois.

The par at Paris, Rouen, and other parts of France has been reckoned sometimes at 73. 1/2 pence the crown of 6 livres Tournois, generally at 69. 1/2 pence the crown of 6 livres, every livre valued at 12 s. 6 d. sterling; the crown valued at 48 s. 6 d. sterling.

The par at Leghorn, Madrid, Calais, Genoa, is at 54 pence sterling for the dollar or piece of eight.

The par at Venice with our sterling money is at 6. 1/2 pence, 4 pence of Venice per ducat, or 51 pence sterling, sometimes 52 pence.

The Hamburg par is sometimes reckoned at 10. 1/2 dollars and 1/2 half, which makes 21 shillings Flemish for 20 shillings sterling.

The par at Lisbon is at 6 s. 8 d. for the milree or 1000 reis.

The par at Oporto is the same as that at Lisbon.

The value of the most usual coins with which England does chiefly exchange are, viz.

	Sterling money	
	Shillings	Pence
10 shillings	10	0
6 shillings of 1s. Flemish is	6	0
1 Flemish guilder	20	0
10 shillings of 10 guilders or 100 livres	10	0
10 guilders of 100 livres	10	0
33 s. 4 d. Flemish is	33	4
1 Zealand common dollar is	10	0
1 Ducat	10	0
1 Specie dollar	10	0

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Sterling money.

12 deniers, or 1 soluz is	—	—	—	0—4
20 soluz or livre is	—	—	—	0—3 $\frac{1}{2}$
3 livres, or a French crown	—	—	—	1—6
				4—6

13 $\frac{77}{100}$ malvadees	—	—	—	0—0 $\frac{1}{2}$
372 malvadees, or 1 royal	—	—	—	0—6 $\frac{1}{2}$
7 $\frac{29}{100}$ royals is 1 ducat	—	—	—	4—4
8 royal piece of copper	—	—	—	4—6
1 royal copper	—	—	—	3—0
17 $\frac{1}{2}$ ditto copper is 1 piece of eight, or	—	—	—	4—6

12 $\frac{1}{2}$ reas of Portugal	—	—	—	0—1
1 milrea, or 1000 reas	—	—	—	6—8 $\frac{1}{2}$
1 teltoon is	—	—	—	1—3

1 livre at Leghorn is	—	—	—	0—9
1 crown current at Florence is	—	—	—	5—3
1 ducat da banco at Venice	—	—	—	4—4
1 St. Mark	—	—	—	2—10
1 Palermo florin is	—	—	—	2—6

1 rix dollar of the empire	—	—	—	4—5 $\frac{1}{2}$
4 $\frac{1}{2}$ rix dollars makes 32 Flemish	—	—	—	20—0
at Hamburgh, &c.	—	—	—	7—1
1 guilder of Noremburg	—	—	—	—

A merchant in London remits to Rotterdam 375 l. 10s. sterling, at 34 s. 8 d. for 20s. sterling, how many guilders Flemish must be paid at Rotterdam, and what is gained per exchange?

Arithmetical Progression

When a rank or series of numbers differ orderly from one another, by some common number.

To find the sum of any arithmetical progression, add the first and last numbers together, and multiply that sum by half the number of places, and that product is the sum. But if the number of places be odd, multiply the said number of places by half of the first and last added, and that product is the sum.

2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.

What the sum?

16 Last

1 First

17 Sum

8 Half of the number of places

136 Sum of the whole

Suppose a man hireth a room for a year, and agreeth pay the first week 5d. the second week 9d. and for the third week 13d. so paying every week 4d. more until 52 weeks or a year is finished, I demand what the sum will come to?

Answer 23l. 3s. 8d.

Here you are to consider that the common increasing number is 4d. so that the last week must amount to 51d. added to the pay of the first week, which is 5d. then will the last week come to 209 pence, then work as in the example.

4*4 436

12) 5564 (463.
 48

Product 2084 76
 48 72

Added 208 the last week 44
 8 the first week 36

Added 214 8d.
 26 half weeks in the year

210) 4613 (23l. 3s. 8d.

1284
 428

Pence 5564

Geometrical Progression.

Suppose one sold 12 ells of cloth, to receive for the first ell 1d. the second 2d. the third 4d. and so on doubling what is paid for the 12 ells?

0, 1, 2, 3, 4, 5, 6.
 1, 2, 4, 8, 16, 32, 64.
 32
 128
 192
 2084

Answer 2084 Pence

Note, That if this question had been for a farthing button, or the like, the answer would have been farthings.

Suppose one sold a horse having 4 shoes, and every shoe 6 nails, to receive for the first nail 1 farthing, the second nail 2 farthings, the third nail a penny, and

doubling, how much is paid for the last nail, and the price of the horse?

Answer 174761. 53c. 5

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.
1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096
4096

12288
18432
81920

8388608

2

Each 16777216

Or if this question had been of a coat sold at a bargain a button, and so doubling to 24 buttons (accounting 900 corns to a pint) divide the 16777216 the 900 corns, the quotient gives about 11641 pints, which divide by 64 (the pints in a bushel) the quotient is about 262 bushels, or about 36 quarters of barley for the coat.

The Rule of Fellowship or Company

MAY fairly be divided into gain, loss, and time.

A general Rule,

As general stock to general profit bears;
So each man's stock in general profit shares.

That is to say,

Every man's particular stock being added together, the total must be the first number in the rule of three, gains the second, and every man's particular stock third; as,

Suppose two bookfellers in company, Y laid in 20/. laid in 40/. whereby was gained 58/. what is each's part of the gain?

Y 20
Z 40

If 60l gain 50l, what will 20l gain?

$$\begin{array}{r} 60 \overline{) 1000} \\ 6 \overline{) 1000} \\ 16 \overline{) 1000} \\ 13 \overline{) 1000} \\ 4 \overline{) 1000} \end{array}$$

If 60l gain 50l, what will 40l gain?

$$\begin{array}{r} 40 \overline{) 1000} \\ 25 \overline{) 1000} \\ 18 \overline{) 1000} \\ 6 \overline{) 1000} \\ 8 \overline{) 1000} \end{array}$$

Suppose two merchants make a stock. B laid in 45 and C laid in 68, whereby they gained 32. how much the gain be divided?

The Rule of Fellowship or Company

If 113l gain 32l, what will 45l gain?

B 45
C 68
113

$$\begin{array}{r} 45 \overline{) 113} \\ 2 \overline{) 113} \\ 160 \overline{) 113} \\ 12 \overline{) 113} \\ 11 \overline{) 113} \end{array}$$

As General stock to General profit bears ; so each man's stock in general profit bears ;

Every man's particular stock added together ; shall be the first number the rule of three ; gains the second ; and every man's particular stock shall be the third ; as

ARITHMETIC.

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If 113/ gain 32/ what will 68/ gain?

68

256

192

113/ 2176/ 19/ 22/ C's part :

113

1046

1017

29

The 29 of the fraction multiplied by 240, the pence
and the product divided by 113, the quotient
is the pence.

Suppose three merchants F, G and C, join their mo-
nies to make a stock of 25000/, of which F laid in 10000/
8000/ and C 7000/, with this, after a certain time of
trading, they gained 7500/, how must this be parted?

If 25000/ gain 7500/, what will 10000/ gain?

10000

25000/ 75000/ 1000/ (3000/ F's part

75

0000

If 25000/ gain 7500/, what will 8000/ gain?

8000

25000/ 6000/ 1000/ (2400/ G's part

50

100

100

800

If 25000/ gain 7500/, what will 7000/ gain?

$$\begin{array}{r}
 25|000)525000|000(2100/ \text{ C's part} \\
 \underline{50} \qquad \qquad \text{F } 3000/ \\
 \qquad \qquad \qquad \text{G } 2400/ \} \text{ Stocks added} \\
 \qquad \qquad \qquad \text{C } 2100/ \\
 \hline
 25 \qquad \qquad \qquad 7500 \\
 \hline
 25 \qquad \qquad \qquad 7500 \\
 \hline
 \qquad \qquad \qquad 7500
 \end{array}$$

The Rule of Fellowship with Time.

The Rule.

EVERY man's stock must be multiplied by his time and the total of these products added together is the first number, the gain or loss the second number and the product of every man's particular stock and time the third number.

Suppose two merchants in company, A laid in 100 for 4 months, B put in 136/ for 3 months, and they gained 50/, what is each man's part?

$$\begin{array}{l}
 \text{A put in } 100/ \} \text{ multiplied by } \{ 4 \} \text{ give } \{ 400 \\
 \text{B put in } 136/ \} \text{ multiplied by } \{ 3 \} \text{ give } \{ 408
 \end{array}$$

If 808/ gain 50/, what will 400/ gain?

$$\begin{array}{r}
 808)20000(24 \frac{1}{8} \text{ A's part} \\
 \hline
 1616
 \end{array}$$

$$\begin{array}{r}
 3840 \\
 3232 \\
 \hline
 608
 \end{array}$$

ARITHMETIC.

175

If 808/ gain 50/, what will 408 gain?

408

400

2000

808)20400(25/ $\frac{200}{100}$ B's part

1616

4240

4040

200

Suppose three farmers, as A, B and C hold a pasture, which they pay 45/ per annum, A hath 24 oxen 32 days, B hath 12 48 days, and C fed 16 oxen there 49 days, what must every man pay of the rent?

Oxen

Days

A 23

B 12

C 16

multiplied by

32

48

49

give

768

576

784

1728

RULES OF PRACTICE.

The even parts

Of a pound

Of a shill.

Of a hundred

1
10—0
6—8
5—0
4—0
3—4
2—0
1—8

1
6—
4—
3—
2—
1—

100
56—
8—
2—
16—
1—

1. When the given price is pence, take your part in shillings, the product divided by 20 gives the answer in pounds.

Or, You may bring it into pounds, at once, by cutting off the last figure, and by considering that 240 pence is 1 pound, whereof 8d is $\frac{1}{3}$, 6d is $\frac{1}{2}$, 4d is $\frac{2}{3}$, 3d is $\frac{1}{4}$, 2d is $\frac{1}{5}$.

EXAMPLES.

254 lb. of tobacco at 1d	716 cels at 3d
$\frac{1}{12}$ 2 1 2d	$\frac{1}{4}$ 3 8 19 0 fac
L. 1 1 2 facit	215 lb at 4d
254 lb at 2d	$\frac{1}{3}$ 4 3 11 8 fac
$\frac{1}{6}$ 42 4	643 gall. at 6d
L. 2 2 2 facit	$\frac{1}{2}$ 6 16 1 6

The three last examples are brought into pounds in one operation, after which manner any sum of practice may be readily cast up.

Here you may see that 254 pounds of tobacco at a pound, divided by the $\frac{1}{12}$, gives 21s 2d, and that divided by 20, by cutting off the last figure, and taking of it, gives 1l 1s 2d, the price of 254 pounds of tobacco: and for 2d the pound take the $\frac{1}{6}$, because 2d is the $\frac{1}{6}$ part of a shilling, and for 3d a pound take $\frac{1}{4}$, and for the others at 4d and 6d.

2. When the given price is such pence as are no even part of a shilling, take first the greatest even part of a shilling, and then part of that part: add them together, and divide the product by 20, or cut off the last figure, and take $\frac{1}{20}$.

ARITHMETIC.

177

2121 ells at 5d

707 s

176-9

883-9

44-3-9 facit

748 lb at 7d

6d is $\frac{1}{2}$ or 374

of which 1d, or $\frac{1}{4}$ is 62-4

436

L 21-16-4

254 lb of tobacco at 9d and 10 $\frac{1}{2}$ a pound

127

63-6

190-6

2-10-6 facit

254 at 10 $\frac{1}{2}$ d

127 shillings in 254 6d

84-8 in 254 groats

10-7 in 254 halfpence

5-3 $\frac{1}{2}$ in 254 farthings

2217-6 $\frac{1}{2}$

11-7-6 $\frac{1}{2}$ facit

Demonstration. In 254 pounds of tobacco at 10 $\frac{1}{2}$ d a pound, there must be 254 sixpences, which is 127 shillings, and 254 groats, which is 84 8d, and 254 halfpence, which is 10 7d, and 254 farthings, which is 5 3 $\frac{1}{2}$ d, all these added together, make 2217 6 $\frac{1}{2}$ d, which divided by 20, gives the answer 11 7 6 $\frac{1}{2}$.

614 lb at 11 d

307

204-8

51-2

5612-10

2-2-10 facit

563 lb at 11 $\frac{1}{2}$ d

281-6d

187-8

70-4 $\frac{1}{2}$

5319-6 $\frac{1}{2}$

67-19-6 $\frac{1}{2}$ fa

3. If the given price be any number of pence above 12, and less than 24, take the aliquot parts in pence, as in the last precedent, to which add the given quantity for 1s, and proceed as before.

EXAMPLES.

$\frac{1}{4}$	254 lb at 15 d	$\frac{1}{4}$	254 lb at 17 d
$\frac{1}{4}$	63—6	$\frac{1}{4}$	84—8
$\frac{1}{4}$	317—6	$\frac{1}{4}$	21—2
$\frac{1}{4}$	15—17—6 facit	$\frac{1}{4}$	3519—10
$\frac{1}{4}$	264 yds at 18 d	$\frac{1}{4}$	17—19—10 facit
$\frac{1}{4}$	132	$\frac{1}{4}$	295 gallons at 19 d
$\frac{1}{4}$	3916	$\frac{1}{4}$	147—6
$\frac{1}{4}$	19—16—0 facit	$\frac{1}{4}$	24—7
$\frac{1}{4}$	672 lb at 22 d	$\frac{1}{4}$	4617—10
$\frac{1}{4}$	336	$\frac{1}{4}$	23—7—1 facit
$\frac{1}{4}$	224	$\frac{1}{4}$	456 cells at 25 d
$\frac{1}{4}$	42	$\frac{1}{4}$	228
$\frac{1}{4}$	12714	$\frac{1}{4}$	152
$\frac{1}{4}$	63—14—0 facit	$\frac{1}{4}$	38
$\frac{1}{4}$		$\frac{1}{4}$	9—6
$\frac{1}{4}$		$\frac{1}{4}$	8813—6
$\frac{1}{4}$		$\frac{1}{4}$	44—3—6 facit

In 672 lb at 22 d a lb I take $\frac{1}{4}$ for 6 d, the $\frac{1}{4}$ for 1 d, and the $\frac{1}{4}$ for the $\frac{1}{4}$ because $\frac{1}{4}$ is the $\frac{1}{4}$ of 6 d, which you will find that in 672 sixpences there is 33 shillings, and in 672 groats there is 224 shillings, and in 672 three farthings there is 42 shillings.

4. If the given price be such shillings as are an even part of a pound sterling, take such a part of the given quantity, and the quotient is pounds.

Shillings	Yards
433 at 1—8	271 at 2—
$\frac{1}{4}$ 36—1—0 facit	$\frac{1}{4}$ 27—2—0 facit
672 at 2—6 d	495 at 3—6 d
$\frac{1}{4}$ 84—5—0 facit	$\frac{1}{4}$ 82—10—0 facit

Crowns

457 at 5s

114 5 0 facit $\frac{1}{2}$

295 at 6s 8d

98 6 8 facit $\frac{1}{2}$

Dollars

612 at 4s

122 8 0 facit

372 at 10s

186 0 0 facit

In this first example of 433 ells at 1s 8d, I take the 1s 8d is the $\frac{1}{2}$ of 1l, and say, 12 in 43 is 3 times, rest 7, which makes the 3 to be 73, then 12 in 73 times, rest 1, which is 1s 8d, I put down as above. If the given price be such shillings and pence as are even parts of a pound, multiply the given quantity by number of shillings, and take the aliquot parts of the same, and proceed according to the second rule.

Ells

375 at 8s 6d

8

3000

187 6

31018 6

159 7 6

Ells

493 at 15s 10d

15

2465

493

246 6d

164 4d

78015 10

390 5 10 facit

C

295 at 12s 9d

12

3540

47 6

73 9

37611 3

18811 3fa

C

214 at 7s 4d

7

1498

107

53 6

35 8

16914 2

84 14 2 facit

6. If your given price be any number of pounds, shillings and pence; reduce first your pounds and shillings into shillings, and proceed according to the last rule.

Pieces	l	s	d	Tuns	l	s	d
754 at	4	3	2	176 at	3	7	10
83		20		67		20	
2262		83		1232		67	
6032				1056			
377				11792			
62		10		88			
630211		10		58		8	
4151		10	facit	119318		8	
				596	18	8	facit

7. If your given price be any number of pounds, exceeding five pounds, than multiply your given quantity by the number of pounds, and take your aliquot parts in shillings and pence, viz.

C	l	s	d	Hhds	l	s	d
74 at	11	12	6	394 at	16	16	3
11				16			
814				2364 } at 16			
10 1/2	36		d	394 }			
2 1/2	9	5	0	197 at 10s			
360	5	0	facit	98 10 at 5			
				19 14 at 1			
				4 18 6 at 3d			
				16624	0	6	facit

8. If the given quantity be any number of C. qrs. pounds, or tuns, C. qrs. or pounds, &c. work as before where no part is, and take your aliquot parts in quarters and pounds, or in C. qrs. and pounds, and add them to your first work. An example or two will make this plain.

C	s	d
75½ at 22 6		
22		
150		
150		
37 6		
11 3		
169 8 9		
84 18 9	facit	

C	s	d
63½ at 12 10		
12 mul.		
756 s		
31 6d		
21		
9 7½ C.		
81 8 1	Sum	
40 18 1½		

In the example of 63 C ½ at 12s 10d the C weight, multiply the C by 12s, and take the parts in pence for odd pence; then for the ½ of C I first take the ½ of price of a C, and that makes 6s 3d, the price of ½ a and then I take the half of that, which gives 3s 2½d prime of a ¼ of a C. Add them together it gives price of ¾ of a C, which is 9s 7½d, and must be added to your first work. Two or three examples more make it familiar and easy to any capacity.

84 C 3 qrs 11 lb at	21s 10d
21	
84	lb ½ 5 5 ½
168	7½ 1 4 ½
42	47 0 9 ¼
28	
18 6	18 6

The price of 3 qrs 11 lb

18 12 6
92 12 6
The operation is performed thus: 8 lb 8 in 2 times 2 C terms 16 lb 16 in 4 times 2 C terms 32 lb 32 in 8 times 2 C terms 64 lb 64 in 16 times 2 C terms 128 lb 128 in 32 times 2 C terms 256 lb 256 in 64 times 2 C terms 512 lb 512 in 128 times 2 C terms 1024 lb 1024 in 256 times 2 C terms 2048 lb 2048 in 512 times 2 C terms 4096 lb 4096 in 1024 times 2 C terms 8192 lb 8192 in 2048 times 2 C terms 16384 lb 16384 in 4096 times 2 C terms 32768 lb 32768 in 8192 times 2 C terms 65536 lb 65536 in 16384 times 2 C terms 131072 lb 131072 in 32768 times 2 C terms 262144 lb 262144 in 65536 times 2 C terms 524288 lb 524288 in 131072 times 2 C terms 1048576 lb 1048576 in 32768 times 2 C terms 2097152 lb 2097152 in 65536 times 2 C terms 4194304 lb 4194304 in 131072 times 2 C terms 8388608 lb 8388608 in 32768 times 2 C terms 16777216 lb 16777216 in 65536 times 2 C terms 33554432 lb 33554432 in 131072 times 2 C terms 67108864 lb 67108864 in 32768 times 2 C terms 134217728 lb 134217728 in 65536 times 2 C terms 268435456 lb 268435456 in 131072 times 2 C terms 536870912 lb 536870912 in 32768 times 2 C terms 1073741824 lb 1073741824 in 65536 times 2 C terms 2147483648 lb 2147483648 in 131072 times 2 C terms 4294967296 lb 4294967296 in 32768 times 2 C terms 8589934592 lb 8589934592 in 65536 times 2 C terms 17179869184 lb 17179869184 in 131072 times 2 C terms 34359738368 lb 34359738368 in 32768 times 2 C terms 68719476736 lb 68719476736 in 65536 times 2 C terms 137438953472 lb 137438953472 in 131072 times 2 C terms 274877906944 lb 274877906944 in 32768 times 2 C terms 549755813888 lb 549755813888 in 65536 times 2 C terms 1099511627776 lb 1099511627776 in 131072 times 2 C terms 2199023255552 lb 2199023255552 in 32768 times 2 C terms 4398046511104 lb 4398046511104 in 65536 times 2 C terms 8796093022208 lb 8796093022208 in 131072 times 2 C terms 17592186044416 lb 17592186044416 in 32768 times 2 C terms 35184372088832 lb 35184372088832 in 65536 times 2 C terms 70368744177664 lb 70368744177664 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Tun C qr lb l s d
 12 14 3 14 at 15 17 06 a tun
 12

190	10	00
7	18	9
3	3	6
0	7	11½
0	3	11½
0	1	11½
202	06	01½

The Order of deducting Tare and Tret.

Gross is the weight of a commodity, with the head, chest, box, or whatever else contains.

Tare is the allowance given for the weight of cask, hoghead, &c.

Tret is an allowance of 4 pounds in 104 pounds, waste and dust on some sort of goods.

Example. 11 hhds. qt. 45 3 15 gross, tare 14 per
 14 0 ¾ $\frac{1}{4}$ how many lb neat
 5 2 26 tare
 Answer 40 0 17

1. Here 14 pounds tare being $\frac{1}{4}$ of 112 pounds, $\frac{1}{4}$ of the gross, the quotient gives the whole tare, which subtract from the gross, gives the neat weight.

The operation is performed thus: divide the gross, say 8 in 45, 5 times, and 5 C remains, which is 23 qrs, and 3 is 23: then 8 in 23, 2 times, 7 qrs remain, which turned into pounds by 28, and added to the 20 pounds, make 211 pounds, then 8 in 211 is 26 times, and 3 pounds remain. So the tare is 5 C, 2 qrs, 26 pounds.

C	qr	lb
sample 40	0	17
22		
80		
80		
20		
0	3	4½
90	0	3 4½
1	45	3 4½

Neat at 22	s	d
16		
14½	2	9 ½
2½	0	4 ¾
1½	0	2 ¼
facit 3	4	¾
price of 17 lb		

If the tare be 16 pounds in 112 pounds, take ⅙ of the gross, and work as before.

If 18 pounds per 112 pounds, for tare, take the aliquot parts, viz.

For 16 lb take the ⅙ } Add the tare of 16, and the
For 2 take the ⅙ } tare of 2 together, the total
subtract from the gross, and work as before.

lb lb }
If 20 in 112 for tare } for 16 take ⅙
 } for 4 take ¼ of 16

When an allowance is made for tret, then (after tare is subtracted from the gross) the remainder is called futtle, which divide by 26 (because 4 pounds is 26th part of 104, the allowance always given for tret) the quotient gives the tret, which subtracted from the futtle, gives the neat weight.

Example. $\begin{array}{r} \text{C} \quad \text{qn} \quad \text{lb} \quad \text{lb} \quad \text{lb} \quad \text{lb} \\ 45 \quad 3 \quad 15 \text{ gr. tare} \quad 16 \text{ in} \quad 112 \text{ tret} \quad 4 \text{ in} \end{array}$
 $16\frac{1}{2} \quad 6 \quad 2 \quad 06 \text{ tare}$

$\begin{array}{r} 39 \quad 1 \quad 09 \text{ futtle} \\ 4 \end{array}$

$4)104$

$\begin{array}{r} 157 \\ 28 \end{array}$

1265

324

$4405 \text{ pounds futtle} \quad 26)4405$
 $169 \text{ tret} \quad \underline{\quad} \quad 180$

$4236 \text{ neat pounds at } 6d$

$169 \quad 245$

$6\frac{1}{2} \quad 2118s$

$4105 \quad 18 \quad 0 \text{ facit}$

3. If the allowance for tare be 8 pounds, 10 pounds, 12 pounds, in 112, or any other lesser number, whether an aliquot part of 112 or not, in such cases, divide the gross into two parts by 2, which will make it 56 hundreds, then say, 8 is $\frac{1}{7}$ of $1\frac{1}{2}$ C. or of 12 pounds 112 pounds.

Rule. From $\frac{1}{2}$ of the gross, take $\frac{1}{7}$ of that 8th tare at 12 per cent. When you have found tare, subtract it always out of the whole gross.

I might enumerate examples, but these being sufficient to instruct any ordinary capacity in tare and tret.

I shall proceed to shew some other abbreviated way of casting up goods and merchandize.

For retailers of small parcels, as mercers, linnen woollen drapers, haberdashers of hats, &c.

THE most abbreviate and ready way is, to multiply the price by the quantity.

Example. Sold 7 yards of cloath, at 14s 6d a yard.

7

Ans. L. 5—1—6

Say 7 times 6 is 42, which is 3s 6d, set down 6 pence
 carry 3 shillings to the place of shillings, and say, 7
 times 4 is 28, and 3 I carry is 31, set down 1s, and car-
 ry 3 angels to the place of tens of shillings, and say, 7
 times 1 is 7, and 3 I carry is 10 angels, which is 5s.
 the 5s in the place of pounds: so the price of 7 yards
 is 5l 1s 6d.

Example. Sold 11 yards and $\frac{1}{2}$ at 23s 3d.

11.

L. 7—5—9

the $\frac{1}{2}$ yard 6—7 $\frac{1}{2}$

Ans. L. 7·12 4 $\frac{1}{2}$

For half a yard, take half of 13s 3d and add to the
 product of 11 yards.

Object. There are many numbers under 100 that are
 included in the multiplication table, or being multi-
 plied together, will not produce the given quantity;
 so consequently cannot be done by this new way
 of practice.

Ans. It is very true, there are several numbers under
 100 that no two numbers multiplied together can pro-
 duce them, such as 13, 17, 19, 25, 29, 31, 33, 37,
 and many more.

Rule. In such cases, multiply by two such numbers,
 the product of which being multiplied together will come nearest to such
 numbers; then multiply the price by that part
 which wants to make up the given quantity. An ex-
 ample of which follows.

Example. 29 cils at $7\frac{4}{9}$

7 Here I multiply by
and 4, because 7 times
2—14—3 is 28, and for the odd

4 to make it 29, I add the
price of the cil to the
10—17—0 product.

Ans. 11/4/9d

Ans. 11—04—9

FRACTIONS

Are of two kinds } **VULGAR,**
and
} **DECIMAL.**

A Vulgar fraction is caused by division of whole numbers, the remainder of which being less than the divisor, called the numerator, is always the dividend, and the denominator is the divisor.

3 Numerator.

4 Denominator.

A decimal fraction is such a one, whose denominator is understood, and therefore need not be expressed: it is an unit with as many cyphers following it, as there be figures and cyphers in the numerator.

Decimal fractions, whether they stand alone, or joined with integers, have always a comma or point before them to distinguish them from integers, as, 5, 5600

In decimals the value of every figure or cypher creases by a tenfold proportion from the units place towards the right hand, as the whole numbers do increase the value towards the left hand, by the like proportion as you may see in the following table.

6 C Thous.
5 X Thous.
4 Thous.
3 Hundreds
2 Tens
1 Units

Whole numbers + Decimals

Cyphers before integers, and at the end, or right hand of decimals are of no value; but after integers, and before decimals they have their value; for in integers they increase, and in decimals they diminish the value of the other figures joined with them.

The integers 005 is but 5, and 004 is but 4, and 06 but 6.

But in decimals, .005 is $\frac{5}{1000}$ and .004 is $\frac{4}{1000}$, and .06 is $\frac{6}{100}$.

and again, in integers 500 is five hundred, and 400 four hundred.

In decimals 500 is but 5, and 400 is but 4, &c.

Next to abbreviation and valuation of vulgar fractions, there is little required, but to know how to bring a fraction of a lesser name into a fraction of a greater name, and to reduce fractions of diverse unequal denominators to one common denominator, which being well understood, you may with as much ease add, subtract, multiply and divide a fraction as you can a whole number.

In decimals a fraction is seldom abbreviated: therefore,

1. To abbreviate any vulgar fractions, find such a number for dividing both the numerator and denominator hereof so, that no remainder be on either of the divisions.

Example. Abbreviate $\frac{26}{120}$ into $\frac{13}{60}$ its lowest term.

Say, 12 in 96, 8 times, and 12 in 120, 10, then the fraction is $\frac{8}{10}$; then say, 2 in 8, 4 times, and 2 in 10, 5 times, then the fraction is $\frac{4}{5}$, so that 4 is to 5, as 96 to 120.

2. To know what part of a pound sterling any number of shillings and pence is, bring the shillings and pence

To value a mixt number, Multiply the mixt number by the numerator, and divide by the denominator.
Example.

A ship worth 794—11—9 what is $\frac{1}{2}$ worth?

$$8 \overline{) 3972} \rightarrow 18 \rightarrow 9$$

$$\text{facit } 496 \rightarrow 12 \rightarrow 4\frac{1}{2}$$

6. To value a decimal fraction, expressing coin; every prime or unit in the first place is 2s value; every in the second place 1s, and the rest farthings; but if they exceed $\frac{1}{1000}$ there must be one farthing abated.

Reduce $\frac{7}{8}$ of a pound into a decimal fraction.

$$9 \overline{) 700000}$$

$$77777$$

Here 7 primes is 14s, and 5 taken out of the second place is 1s which makes 15s, then 2 remains, which is 4 to the thirds, or place of farthings, out of which 1 is for $\frac{1}{1000}$, it makes 15s 6 $\frac{1}{2}$ d, which is the $\frac{7}{8}$ of a pound sterling.

7. To reduce vulgar fractions to a common denominator, Multiply the numerator of each fraction into every denominator, except its own, which makes the product of a new numerator; then multiply all the denominators together, and that product is one common denominator to all the new numerators. Example.

Reduce $\frac{3}{8}$ and $\frac{1}{9}$ to a common denominator.

$$\text{Facit } \frac{9}{72} \text{ and } \frac{8}{72}$$

Here 12 is the common denominator to both the new numerators, viz. 8 and 9, and you find that 8 is to 12 as 3 to 6, and 9 is to 12, as 4 to 6.

$$\text{So that } \frac{3}{8} \text{ is to } \frac{9}{72} \text{ as } \frac{1}{9} \text{ is to } \frac{8}{72}$$

Reduce $\frac{1}{2}$, and $\frac{1}{3}$, and $\frac{1}{4}$ of a pound to a common denominator.

To prove your work, Divide 4 your new numerator by the numerator of that fraction, and divide the common denominator of the fraction by the denominator, if both quotients are equal, your work is true.

Exam. $\frac{144}{192}$ is $\frac{48}{192}$ here divided by 3, make 48, and 192 divided by 4, gives 48, which was to be proved. Or, you may prove your work by abbreviation of fractions; but it is attended with more difficulty, where 4 or more fractions are reduced to a common denominator.

Now this reduction of fractions is of little use otherwise than to prepare a fraction to be either added, subtracted, multiplied, or divided.

As if the $\frac{1}{2}$ and $\frac{1}{3}$ and $\frac{1}{4}$ were to be added together, reduce them first into a common denominator, as in the last rule, it makes $\frac{144}{192}$ and $\frac{128}{192}$ and $\frac{128}{192}$. Add all the new numerators together, make 472, which divided by 192, the common denominator, makes $2\frac{116}{192}$ as in the following example.

Addition of Vulgar Fractions

144	160	
128	168	
340		
192	472	
2)	88	

Facit $2\frac{116}{192}$ or $2\frac{29}{48}$

And if the $\frac{1}{2}$ and $\frac{1}{3}$ and $\frac{1}{4}$ were to be added together in decimals, reduce them first into decimal fractions according to the third Rule, and the operation stands, viz.

Addition of Decimals.

.75	.8333	.875	
2.45833			
2.45833			

Facit 2.45833, or, 2 $\frac{29}{64}$

By this addition you see how much less work is made by decimals than in vulgar fractions, and how easy their value is found out according to the sixth rule.

8. To reduce the compound fractions, or fractions of a lesser name into the fractions of a greater. Multiply the numerators together for a new numerator, and the denominators multiply together for a new denominator.

Reduce $\frac{1}{2}$ of a penny into the proper fraction of a pound sterling.

Say $\frac{1}{2}$ of $\frac{1}{12}$ of $\frac{1}{20}$, or $\frac{1}{2}$ of $\frac{1}{240}$, facit $\frac{1}{480}$.

9. To reduce a mixt number of a lesser name into the fractions of a greater. Reduce the mixt number into an improper fraction, and work as before.

Reduce $3\frac{1}{2}$ into the proper fraction of a pound sterling.

$\frac{1}{2}$ of $\frac{1}{12}$ of $\frac{1}{20}$, or $\frac{1}{2}$ of $\frac{1}{240}$, facit $\frac{1}{480}$.

By the same rule you may reduce any sort of weight or measure.

For compound fractions, their use is chiefly to bring fractions of divers denominations to one and the same denomination.

As if the $\frac{1}{2}$ of a penny, $\frac{2}{3}$ of a shilling, and $\frac{1}{4}$ of a pound were added together.

The $\frac{1}{2}$ of a penny must be reduced into the fraction of a pound and the $\frac{2}{3}$ of a shilling, must be reduced into the fraction of a pound, thus:

Then the fractions to be added are $\frac{1}{480}$ and $\frac{2}{30}$ and $\frac{1}{4}$, which reduce to a common denominator, and add them together, either by decimals or vulgar fractions.

Addition of Fractions.

If the fractions to be added have one common denominator, add all the numerators together, and divide the product by the common denominator.

Example. Add $\frac{1}{2}$ and $\frac{1}{4}$ of a pound together.

To add $\frac{1}{2}$ and $\frac{1}{4}$ of a pound together, we must first reduce them to a common denominator. $\frac{1}{2}$ is equal to $\frac{2}{4}$, and $\frac{1}{4}$ is equal to $\frac{1}{4}$. Adding these together gives $\frac{3}{4}$. **Facit** $1\frac{3}{4}$ lbs.

2. If the fractions to be added be of different denominators, reduce them to a common denominator, and proceed as before.

Example. Add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ together.

c. 24 + 8 x 7

8	—	8	84
4	28	24	8
3	—	3	64
32	—	—	96
3	84	72	96
2	—	—	—
24	—	—	—
96	96	96	Facit 238

24 = 21
3 = 18
2 = 16

To add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ of a pound in decimals, reduce them into decimal fractions, and add them up as whole numbers, keeping the place of units just under each other.

Example. Add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ together.

875	—	875
75	—	75
666	—	666
2,2916	—	2,2916
Facit	5	4

875
75
666
2,2916

To add $\frac{7}{8}$ and $\frac{3}{4}$ and $\frac{2}{3}$ of a pound in decimals, reduce them into decimal fractions, and add them up as whole numbers, keeping the place of units just under each other.

Subtraction of Fractions.

1. **T**O subtract fractions of different denominators, reduce them to a common denominator, and subtract the lesser fraction from the greater.

Example. From $3\frac{1}{2}$ take $1\frac{1}{2}$, from $\frac{8}{2}$

take $\frac{1}{2}$

Facit $2\frac{1}{2}$

2. If you have a mixt number (or integer and fraction) and the fraction to be subtracted be greater than the fraction from which you are to subtract, Borrow an integer from the mixt number, and work in subtraction of whole numbers.

Example. From $11\frac{1}{2}$ take $8\frac{1}{2}$

Here I cannot take $\frac{1}{2}$

out of $\frac{1}{2}$, therefore, I

borrow an integer, viz.

12, and say, 9 out of 12,

rests 3, to which add $\frac{1}{2}$,

rest $3\frac{1}{2}$, and carry 1 to 2, is 3 1. out of 11 1. rest 8, and

rest $3\frac{1}{2}$.

From $25\frac{1}{2}$ from 42

Take $19\frac{1}{2}$ take $16\frac{1}{2}$

Facit $15\frac{1}{2}$ facit $25\frac{1}{2}$

Subtraction of decimals is the same as in whole numbers, keeping the place of units just under each other of the integers, and primes under primes of the decimals,

l.
From $\frac{7}{8}$.875
Take $\frac{1}{4}$.75
Rest .125

l. s. d.
the $\frac{7}{8}$ is 17-6
 $\frac{1}{4}$ is 15-0
Rests 2-6

Equal to the Decimal .125

Multiplication of Fractions.

To multiply proper fractions, multiply the numerators together for a new numerator, and the denominators multiply together for a denominator.

Example. Multiply $\frac{1}{2}$ by $\frac{1}{2}$, facit $\frac{1}{4}$.

R

2. If a mixt number and a fraction are to be multiplied together, reduce the mixt number into an improper fraction, and work as in the last.

Example. Multiply $11\frac{1}{2}$ by $\frac{3}{4}$.

$\frac{23}{2}$ by $\frac{3}{4}$ facit $\frac{69}{8}$.

Example. Multiply $11\frac{1}{2}$ by $2\frac{1}{2}$.

$\frac{23}{2}$ by $\frac{5}{2}$ fac. $\frac{115}{2}$ or 32 $\frac{1}{2}$.

3. To multiply a mixt number by an integer, make the integer an improper fraction, by placing (1) under it, and reduce your mixt number into an improper fraction, and work as in the first rule.

Example. Multiply $7\frac{1}{2}$ by 4

$\frac{15}{2}$ by $\frac{4}{1}$, facit 30 .

4. Multiplication of decimals is the same as in whole numbers, saying as many decimal parts as are in the multiplicand and multiplier, so many must be cut off from the product, which if it have not so many places the defect must be supplied with cyphers towards the left hand.

Multiply, 1005
by, 631

1005
3015

Facit, 0031 155

11.83

2.87

8281

9464

2366

33.9521

Division of Fractions.

1. TO divide single fractions, there is no need to reduce the fractions to a common denominator

multiply the numerator of the divisor, by the denominator of the dividend. And contrary for the terms of the quotient thus :

Example. Divide $\frac{7}{8}$ by $\frac{1}{2}$

$$\frac{7}{8} \left(\frac{2}{2} \right) \text{ or } 1\frac{1}{8}$$

2. If it happens that the fraction of the divisor be greater than the fraction of the dividend, the facit of such division is a fraction.

Example. Divide $\frac{1}{2}$ by $\frac{3}{4}$

$$\frac{1}{2} \left(\frac{2}{2} \right) \left(\frac{2}{3} \right)$$

$$\text{Facit } \frac{1}{3}$$

3. To divide an integer by a fraction, multiply the integer into the denominator, and divide by the numerator.

Example. Divide 8 by $\frac{1}{3}$

$$8 \left(\frac{3}{3} \right) \left(\frac{1}{1} \right)$$

$$24 \text{ Facit.}$$

4. To divide a fraction by an integer, place the number as follows, and work as by the first rule.

Example. Divide $\frac{1}{2}$ by 3

$$\frac{1}{2} \left(\frac{1}{1} \right) \left(\frac{1}{3} \right)$$

$$\text{Facit } \frac{1}{6}$$

5. To divide a mixt number by an integer, reduce the number into an improper fraction, whose denominator multiply by the integer for your divisor.

Divide $3\frac{1}{2}$ by 2

$$\frac{7}{2} \left(\frac{2}{2} \right) \text{ or } 3\frac{1}{2} \text{ facit.}$$

R 3

6. To divide a mixt number by a fraction, reduce the mixt number into an improper fraction, and work as before.

Example. Divide $3\frac{1}{2}$ by $3\frac{1}{4}$

$$\frac{7}{4}) \frac{13}{2} \text{ (} \frac{105}{18} \text{ facit, or } 6\frac{7}{6} \text{)}$$

7. To divide an integer by a mixt number, reduce the mixt number and integer into improper fractions, and proceed as before.

Example. Divide 5 by $3\frac{1}{2}$

$$\frac{10}{7}) \frac{5}{1} \text{ (} \frac{25}{7} \text{ facit}$$

Or, $1\frac{2}{7}$ facit

8. To divide a mixt number by a mixt number, reduce them into improper fractions, and divide as before.

Example. Divide $2\frac{1}{2}$ by $2\frac{1}{2}$

$$\text{Or, } \frac{5}{2} \text{ by } \frac{5}{2}$$

Facit $\frac{25}{4}$ or $1\frac{1}{4}$

Division of Decimals is the same as in whole numbers till the work be done, and then use the converse of the rule for multiplication, viz. so many decimals as are in the dividend, so many there must be in the divisor and quotient; and if there be not so many, the quotient must be supplied with cyphers towards the left hand

Example. Divide 33,9521 by 2,87

$$\begin{array}{r} 2,87 \overline{) 33,9521} \\ \underline{2382} \\ \text{Facit } 11,83 \end{array}$$

00

See the converse in multiplication of decimals.

The Rule of Three in Fractions.

RULE: You must multiply your second and third numbers together, and divide by your first. Observing the same method as in whole numbers, viz. That the first and third numbers be of one name or denomination.

Example. If $3\frac{1}{2}$ lb buy $\frac{2}{3}$ of tobacco, What shall $96\frac{1}{2}$ lb buy?

$$\begin{array}{r} \frac{2}{3} \text{ of } \frac{1}{2} \text{ lb} \\ \frac{1}{2} \text{ lb} \quad 1 \\ \hline 70 \quad \frac{1}{2} \quad 95\frac{1}{2} \\ \hline \frac{1}{2} \text{ lb by } \frac{2}{3} \\ \hline 70 \end{array}$$

Divide $70\frac{1}{2}$ by 70

$$\begin{array}{r} 70 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 84 \quad 2880 \\ \hline 2880 \end{array}$$

$$\begin{array}{r} 3360 \end{array}$$

$$\begin{array}{r} 84 \quad 367680 \end{array}$$

$$\begin{array}{r} 316 \end{array}$$

$$\begin{array}{r} 648 \end{array}$$

$$\begin{array}{r} 600 \end{array}$$

$$\begin{array}{r} 12 \end{array}$$



Mensuration of plain Superficiés (or flat Measure) such as Board, Glass, Wainscot, Painting, and the like.

1. **T**hat in superficial measure, 12 times 12 inches, being 144 inches, are the number inches contained in a square foot of superficial mea-

2. That to square any number, is to multiply it by itself, as if you would know how many square feet contained in a yard square, multiply 3, the feet in one yard by 3, the product is 9, and so many feet make a yard square.

Example. How many square inches are there in a yard square.

1 yard is 3 feet

12

36 inch

36

216

108

Facit 1296 inch

The general rule is to multiply the length by breadth, the product is the content.

Example 1. A board 12 feet long, and 14 inch broad, how many square feet?

12

12

144

14

576

144

144) 2016

576 Facit 14 square feet.

Example 2. A piece of wainscot 24 feet, 9 inch long and 13 feet deep, how many square yards?

MENSURATION.

199

Feet. Inch.		Yard. Feet. Inch.
24—9	} Mul.	Facit 30—2—3
11		Or, 30—2— $\frac{1}{2}$
272—3		

Example. A painter hath done a room, 90 feet about, and $11\frac{1}{2}$ feet high, demand the square yards therein.

Feet	
11, 5 High	
90 About	

9) 1035 (115 yards for answer.

Note. This way 'tis done much truer and with fewer figures, and no charge to the memory.

Example. A glazier hath done a pane of glass of 5 feet 73, high, and 5 feet 54, broad, at 6 d the foot square.

Note, The glazier's foot divided	57 73
into 10 parts, and every part into	5, 54
10 parts more	
	2292
	2864
	2864

Facit, feet, 31,7442

A general rule to measure round or square pillars.

Multiply the length by the circumference of round pillars.

And for square pillars, add the sides or breadth together, and multiply the total by the length.

Example. A painter hath done a pillar of 6 feet 3 inches circumference, and 14 feet 9 inches long, demand the square yards of painting?

The common and best way to do this, is by cross multiplication thus,

Feet. Inch

$$\begin{array}{r} 24-9 \\ 6-3 \\ \hline 3-8-3 \\ 88-6 \\ \hline \end{array}$$

Facit, feet 92-2-3 answer.

Or, yards 10-2-2-3

Multiplying 9 by 3, gives 2 feet 3, put down the 3 and carry 2; then 3 times 14 is 42, and 2 is 44, which is 3 feet 8, which put down as you see.

Then 6 times 9 is 44, which is 4 feet 6, put 6 under the 8 (as being 12ths of a foot as the 8 is) then 6 times 14 is 84, and 4 is 88. So the sum of the 2 lines is 92 feet 2-3. Or the feet divided by 9, is 10 yards 1 foot, 2 primes (or 12ths of a foot) and 3 seconds or 12ths of a 12th.

The same is done decimally thus:

$$\begin{array}{r} 14.75 \text{ Feet} \\ 6, 35 \\ \hline 7375 \\ 2950 \\ \hline 8850 \end{array}$$

9792,1875

Or yards 10, 2,1875 feet.

For regular polygons, add all the sides together, and multiply the total by half the nearest distance from the center to one of the sides.

For cones, multiply half the length by the circumference.

For pyramids, add all the breadth at the base together, and multiply half the length by the total.

For globes, multiply the area of the greatest circle by it gives the content.

Mensuration of Solids.

Solids; such as stone, timber, &c. are measured by the cubic or solid foot; now a cube is a figure like a dye of 6 equal sides, and a cubic foot contains 12 inches square on every side.

THE rule is, multiply the length by the breadth, and that product multiplied by the depth, which divide by 1728, the cubic inches in a foot solid.

Example.

A piece of timber 16 foot long, 14 inches broad, and 12 inches deep, how many solid feet doth it contain?

$$\begin{array}{r}
 12 \text{ feet} \quad 16 \\
 \times 12 \\
 \hline
 144 \quad 192 \\
 \times 12 \\
 \hline
 1728 \quad 768 \\
 \times 12 \\
 \hline
 20736 \quad 9216 \\
 \hline
 1728 \overline{) 24192} \text{ Feet } 14 \text{ Feet} \\
 \underline{14} \quad 6912 \\
 \underline{14} \quad 0000
 \end{array}$$

Example.

A stone 7 feet 3 inches long, 4 feet 5 inches broad, and 2 feet 3 inches deep, how many solid feet?

$$\begin{array}{r}
 7 \text{---} 3 \text{---} 4 \text{---} 5 \text{---} 2 \\
 12 \qquad 12 \qquad 12 \\
 \hline
 87 \text{ length} \qquad 53 \qquad 27 \\
 53 \text{ breadth}
 \end{array}$$

$$\begin{array}{r}
 261 \\
 435 \\
 \hline
 4611 \\
 27 \text{ deep Facit } 72 \text{ solid feet}
 \end{array}$$

$$\begin{array}{r}
 32277 \\
 9222 \\
 \hline
 \end{array}$$

Facit 124497 cubic inches

But the way most used, and which is shorter and more like the arithmetick, is this: how many solid feet are there in a piece of timber 12 feet long, 8 inches square, and 27 inches deep, how many solid feet does it contain?

$$\begin{array}{r}
 \text{Inch Feet} \\
 4 \text{---} 5 \text{ broad} \\
 2 \text{---} 3 \text{ deep} \\
 \hline
 1 \text{---} 1 \text{---} 2 \\
 8 \text{---} 10 \text{---} 0 \\
 \hline
 9 \text{---} 11 \text{---} 3 \\
 7 \text{---} 3 \text{---} \text{long} \\
 \hline
 2 \text{---} 5 \text{---} 9 \text{---} 9 \\
 09 \text{---} 6 \text{---} 9 \\
 \hline
 \text{Feet } 72 \text{---} 0 \text{---} 0 \text{---} 9
 \end{array}$$

Only carrying the 12's both in your multiplication and addition.

To find how many inches in length make a solid foot of timber, multiply the number of inches square in itself for a divisor, and make 1728, the cubical inches of a foot your dividend.

MENSURATION:

203

Example.

A piece of timber 18 inches square, what length will require to make a foot solid?

$$\begin{array}{r} 18 \\ 18 \end{array}$$

$$\begin{array}{r} 144 \\ 18 \end{array}$$

$$\begin{array}{r} 324 \times 1728 \\ \text{Facit 5 inches} \quad 108 \end{array}$$

Example.

How many inches in length will make a foot, at 12 inches square?

$$\begin{array}{r} 12 \\ 12 \\ 144 \times 1728 \\ \hline 288 \end{array}$$

Facit 12 inch.

PLANK MEASURE.

table shewing how many feet make a load of plank of any thickness.

Inch thick	Foot to the load	Inch thick	Foot to the load
1	600	5	120
1½	400	5½	109, 0912
2	300	6	100
2½	240	6½	92, 076
3	200	7	85, 714
3½	171, 428	7½	80
4	150	8	75
4½	133, 333	8½	70, 588

The way to make this table, or to know how many of plank make a load of any thickness.

Rule. Say, if 12 inches thick, require 50 feet to make a load: what will 4 inch thick require? This by the reverse rule of three, gives 150, as you see by the operation.

$$\begin{array}{r} 12. \quad 50 \quad 4. \\ \quad \quad 12 \quad 81 \end{array}$$

4) 600 (150 feet for answer.

So that if you divide 600 by any thickness of plank the quotient sheweth how many feet thereof make a load.

2 Exam. If it were required to know how many loads are in 5762 feet of plank 5 inches thick.

By the table 120 feet make a load; therefore divide 5762 by 120, and the quotient is loads.

120) 5762) 48 1/3 or 48 loads.

Or multiply the feet given by 144, and that product by the thickness of the plank, then divide by 1728 inches in a solid foot, and that quote is feet, which divide by 50 the feet in a load, and you have the load without the table.

$$\begin{array}{r} 5762 \\ 144 \end{array}$$

$$\begin{array}{r} 829728 \\ 5 \end{array}$$

$$\begin{array}{r} 1728) 4148640 (2400 (43 \frac{3}{8} \text{ load.} \\ 6926 \quad 50 \end{array}$$

$$1440$$

Note, The remainder $\frac{1440}{1728}$ is equal to 56 feet, $\frac{3}{8}$ of $\frac{1}{16}$ is equal $\frac{3}{128}$ of the load as above.

Exam: 3. In 1234 feet of 4 inches plank, how many loads and solid feet?

$$150) 1234 (8 \text{ load.}$$

$$3) 34 (11 \text{ solid feet.}$$

For the solid feet, divide the remainder by the number of 50's contained in the divisor, or by the times the thickness of the plank is found in 12 as above.

Alto, if the last example were done by the second rule, under the second example, 1234 multiplied

MENSURATION.

205

gives 177,696, and that by 4 inches thick, 710,784, which divided by 1728, the quote is 411 feet, or 8 (divided by 50) and 11 foot, as in the last rule example.

To know how many feet of plank of any thickness make a tun. Say by the inverse rule of three, 12 to 40, so the thickness to the answer.

12. 40 4.
12

4) 480 (120 feet in the tun.

And so may you make a table of the feet of any thickness in a tun (as is before shewed for the load) by only dividing the 480. by the thickness of the plank.

So in thickness Feet make a tun

of 1 inch—480
2—240
3—160
4—120
5—96
6—80, &c.



A Short and Easy

M E T H O D

OF

B O O K - K E E P I N G

I N S T R U C T I O N S.

Quest **W**Hat is the first thing I must do, who desire to keep my books of accompts after the method.

Answer. You must make an inventory; an example of which is at the end of these instructions.

Q How must I post the first part of this inventory

A You must post it on your ledger, viz, merchandise to the debit of that accompt.

Cash, to the debit of your cash book.

George Mason's debt, to the debit of his accompt

Germain Bell's debt, to his debit also.

And for the whole sum (viz. 730^l) you must get counterpart in credit of stock.

Q How must I post the other part of this inventory

A To the credit of Thos. Richards, the sum you owe him.

To the credit of John Fair, the sum you owe him

And for the whole sum. (viz. 100^l) you must debit stock. See the several accompts, fol. 1, 2.

Q I see by the first page of the day-book, that it contains entries of goods sold to sundry persons: How must these be posted.

A To debit of Richard Hughs, what sold him.

To debit of Anthony Coule, the like.

To debit of James Gray and company, the like.

To debit of Richard Hunt, the like. See their accounts, Fol. 3. ledger.

And counterpart must be given for the whole sum of page (viz. 16/ 10s 10d) on credit of merchandize in the said ledger. See account of merchandize, Fol. 1. and the like must be done for the pages 2, 3, 4, 5 & 6 of the said day-book.

Note, That the ready money taken for goods sold is debited each month to the debit of your cash-book.

How must I enter the monies I receive (of debtors in my ledger?)

On your debit side of your cash-book. See that

How must I post those sums received into my ledger?

To the credits of the persons, of whom received, in the accounts of.

Richard Hughes — Fol. 3

Anthony Coule — Fol. 3

John Gray and company Fol. 3

Thomas Wilton — Fol. 3

Henry Trap — Fol. 4

How must I post (into my ledger) the total receipts of the month of August (viz. 57/ 3 and 10d).

You must post that total to the debit of your cash, in your ledger, writing,

To sundries, Received per cash-books. See the account of cash, in the ledger, Fol. 102.

Do the like for September and October's receipts.

How must I enter the monies I pay to those I owe and who have credit in my ledger.

On the credit-side of your cash-book. See the cash-book.

How must I post those sums paid?

To the debits of the persons to whom paid. See accounts of Thomas Richards, Fol. 2. and John Fair,

in your ledger.

How must I post (into my ledger) the total payments of the month of August (viz. 30/.)

A You must post it to the credit of your cash, in your ledger, writing,

By sundries paid per cash-book. See the account of cash in your ledger, Fol. 1.

Q I understand by these directions, how to state and post my books, How must I proceed in balancing my ledger?

A Value your merchandize remaining unsold, and enter the sum of their value on credit of the account of merchandize, in your ledger. See the account of merchandize, Fol. 1.

And give the counterpart in debit of the account of balance in the said ledger. See the debit of balance, Fol.

Which done, subtract the debit side of the said account of merchandize from its credit, and place the mainder (viz. 97/ 10s) on the debit side of it. See account, Fol. 1.

And give counterpart on credit of profit and loss in the said ledger. See account of profit and loss, Fol.

Then add up debtor and creditor to the account of cash in the said ledger, and subtract the credit from debit, and place the cash remaining (viz. 297/ 7s) on credit of the said account of cash. See the account, Fol. 1. and give counterpart in debit of the account of balance. See said account of balance, Fol. 4.

Q How must I do with the account of expenses?

A Write on its credit side (the 32/) by profit and loss, and give counterpart in debit of the account of profit and loss. See both the accounts, Fol. 2, 4.

Q How must I do with the account of George son, who I find by his account, owes me 10/.

A You must write on credit of his account by balance now owing to me 10/.

And give counterpart, on debit of balance. See the accounts, Fol. 2, 4.

Do in the same manner by the accounts of

Germain Bell — — —

Richard Hughs — — —

John Gray and company — — —

And Thomas Wilson — — —

See their particular accompts in your ledger.

Q How must I do with the accompt of Thomas Richards, to whom I find I owe 20/

A You must write on the debit of his accompt. To balance now due to him 20/

And give counterpart on credit of balance. See both accompts, Fol. 2. 4.

Do the like with the accompt of John Fair. See his accompt. Fol. 2.

Q How must I do to balance or close the accompts stock, profit and loss.

A Subtract the debit, or profit and loss from its credit, and set the remainder (viz 65/ 10s) being your gains during the time of this trade, on the debit profit and loss. See the accompt, Fol. 4.

And give counterpart in credit of stock. See accompt stock, Fol. 4.

Q How must I do to balance the accompts of stock.

A Subtract its debit from its credit, and set the remainder (viz. 685/ 10s being your present net stock) on the debit of stock. See the accompt, Fol. 1.

And give counterpart in credit of balance. See accompt of balance, Fol. 4.

This done, your ledger is balanced, and the accompt balance, Fol. 4.

This done your ledger is balanced, and the accompt balance (if you have proceeded right) will be equal both sides.

The INVENTORY.

London, August 1. 1762.

Have merchandize of sundry	}	L. 520—00—00
to the value of		
Cash or ready money		180—00—30
Owing to me, by		
Mr Mason		20—00—00
Mr Belf		10—00—00
Owing by me, to		
Mr Richards		60—00—00
Mr Fair		50—00—00
		L. 110—00—00
My net stock		620—00—00

Cash-Book. I.

Receipts—Debtor.

August, 1762.

	To stock by inventory	1	180 000
8	Richard Hughs, of him	3	4 00
12	Anthony Coule, ditto	3	3 60
16	John Gray and company, ditto	3	1 100
20	Thomas Wilson, ditto	3	4 130
30	Henry Trap, ditto	4	0 50
pt 31	Merchandize since 1st of August		42 180

L. 57—03—10 Received

September, 1762.

	Last balance		207 02
11	Richard Hughs, of him	3	8 15
—	Anthony Coule, ditto	3	3 00
15	George Mafon, ditto	2	10 00
20	Germain Bell, ditto	2	5 00
24	Henry Trap, ditto	4	2 00
30	John Gray and company, ditto	3	2 00
—	Merchandize since 1st of September		38 00

L. 69—18—08 Received

Book-Keeping

211

I.

Payments—Creditor.

l. s. d.

August, 1762.

By Thomas Richards, to him	2	20	00	00
John Fair, ditto	2	10	00	00
Paid this month		30	00	00

Resting per balance	207	03	00
---------------------	-----	----	----

237 03 10

September, 1762.

John Fair, to him	2	5	00	00
Thomas Richards, ditto	2	10	00	00
Paid this month		15	00	00

Resting per balance	261	12	06
---------------------	-----	----	----

276 12 06

2.

1

Receipts—Debtor.

l. s.

October, 1762.

Last balance

261 12

To Anthony Coule, of him

3 200

John Biddy, ditto

4 218

John Gray and company, ditto

3 515

pt Merchandize since 1st of October

86 11

L. 97—04—07 Received

358 17

November, 1762.

Paid this month

1200 00

Payments———Creditor.

1.		s.		d.	
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102
103	104	105	106	107	108
109	110	111	112	113	114
115	116	117	118	119	120
121	122	123	124	125	126
127	128	129	130	131	132
133	134	135	136	137	138
139	140	141	142	143	144
145	146	147	148	149	150
151	152	153	154	155	156
157	158	159	160	161	162
163	164	165	166	167	168
169	170	171	172	173	174
175	176	177	178	179	180
181	182	183	184	185	186
187	188	189	190	191	192
193	194	195	196	197	198
199	200	201	202	203	204
205	206	207	208	209	210
211	212	213	214	215	216
217	218	219	220	221	222
223	224	225	226	227	228
229	230	231	232	233	234
235	236	237	238	239	240
241	242	243	244	245	246
247	248	249	250	251	252
253	254	255	256	257	258
259	260	261	262	263	264
265	266	267	268	269	270
271	272	273	274	275	276
277	278	279	280	281	282
283	284	285	286	287	288
289	290	291	292	293	294
295	296	297	298	299	300
301	302	303	304	305	306
307	308	309	310	311	312
313	314	315	316	317	318
319	320	321	322	323	324
325	326	327	328	329	330
331	332	333	334	335	336
337	338	339	340	341	342
343	344	345	346	347	348
349	350	351	352	353	354
355	356	357	358	359	360
361	362	363	364	365	366
367	368	369	370	371	372
373	374	375	376	377	378
379	380	381	382	383	384
385	386	387	388	389	390
391	392	393	394	395	396
397	398	399	400	401	402
403	404	405	406	407	408

October, 1762.

Paid this month—	62	00	00
Resting per balance—	296	17	01

338-1701

Day-Book

Account of the

2015

2071. 1. 1898 A

Richard Hughes.

is nearly 15 lbs

November, 1762.

Anthony Cople

28. 11. 1950

John Day and company,

0-01-0 1 0-4 13 216 131 .50 3

[illegible]

1-20-1 (1) 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91, 98, 105, 112, 119, 126, 133, 140, 147, 154, 161, 168, 175, 182, 189, 196, 203, 210, 217, 224, 231, 238, 245, 252, 259, 266, 273, 280, 287, 294, 301, 308, 315, 322, 329, 336, 343, 350, 357, 364, 371, 378, 385, 392, 399, 406, 413, 420, 427, 434, 441, 448, 455, 462, 469, 476, 483, 490, 497, 504, 511, 518, 525, 532, 539, 546, 553, 560, 567, 574, 581, 588, 595, 602, 609, 616, 623, 630, 637, 644, 651, 658, 665, 672, 679, 686, 693, 700, 707, 714, 721, 728, 735, 742, 749, 756, 763, 770, 777, 784, 791, 798, 805, 812, 819, 826, 833, 840, 847, 854, 861, 868, 875, 882, 889, 896, 903, 910, 917, 924, 931, 938, 945, 952, 959, 966, 973, 980, 987, 994, 1001, 1008, 1015, 1022, 1029, 1036, 1043, 1050, 1057, 1064, 1071, 1078, 1085, 1092, 1099, 1106, 1113, 1120, 1127, 1134, 1141, 1148, 1155, 1162, 1169, 1176, 1183, 1190, 1197, 1204, 1211, 1218, 1225, 1232, 1239, 1246, 1253, 1260, 1267, 1274, 1281, 1288, 1295, 1302, 1309, 1316, 1323, 1330, 1337, 1344, 1351, 1358, 1365, 1372, 1379, 1386, 1393, 1400, 1407, 1414, 1421, 1428, 1435, 1442, 1449, 1456, 1463, 1470, 1477, 1484, 1491, 1498, 1505, 1512, 1519, 1526, 1533, 1540, 1547, 1554, 1561, 1568, 1575, 1582, 1589, 1596, 1603, 1610, 1617, 1624, 1631, 1638, 1645, 1652, 1659, 1666, 1673, 1680, 1687, 1694, 1701, 1708, 1715, 1722, 1729, 1736, 1743, 1750, 1757, 1764, 1771, 1778, 1785, 1792, 1799, 1806, 1813, 1820, 1827, 1834, 1841, 1848, 1855, 1862, 1869, 1876, 1883, 1890, 1897, 1904, 1911, 1918, 1925, 1932, 1939, 1946, 1953, 1960, 1967, 1974, 1981, 1988, 1995, 2002, 2009, 2016, 2023, 2030, 2037, 2044, 2051, 2058, 2065, 2072, 2079, 2086, 2093, 2100, 2107, 2114, 2121, 2128, 2135, 2142, 2149, 2156, 2163, 2170, 2177, 2184, 2191, 2198, 2205, 2212, 2219, 2226, 2233, 2240, 2247, 2254, 2261, 2268, 2275, 2282, 2289, 2296, 2303, 2310, 2317, 2324, 2331, 2338, 2345, 2352, 2359, 2366, 2373, 2380, 2387, 2394, 2401, 2408, 2415, 2422, 2429, 2436, 2443, 2450, 2457, 2464, 2471, 2478, 2485, 2492, 2499, 2506, 2513, 2520, 2527, 2534, 2541, 2548, 2555, 2562, 2569, 2576, 2583, 2590, 2597, 2604, 2611, 2618, 2625, 2632, 2639, 2646, 2653, 2660, 2667, 2674, 2681, 2688, 2695, 2702, 2709, 2716, 2723, 2730, 2737, 2744, 2751, 2758, 2765, 2772, 2779, 2786, 2793, 2800, 2807, 2814, 2821, 2828, 2835, 2842, 2849, 2856, 2863, 2870, 2877, 2884, 2891, 2898, 2905, 2912, 2919, 2926, 2933, 2940, 2947, 2954, 2961, 2968, 2975, 2982, 2989, 2996, 3003, 3010, 3017, 3024, 3031, 3038, 3045, 3052, 3059, 3066, 3073, 3080, 3087, 3094, 3101, 3108, 3115, 3122, 3129, 3136, 3143, 3150, 3157, 3164, 3171, 3178, 3185, 3192, 3199, 3206, 3213, 3220, 3227, 3234, 3241, 3248, 3255, 3262, 3269, 3276, 3283, 3290, 3297, 3304, 3311, 3318, 3325, 3332, 3339, 3346, 3353, 3360, 3367, 3374, 3381, 3388, 3395, 3402, 3409, 3416, 3423, 3430, 3437, 3444, 3451, 3458, 3465, 3472, 3479, 3486, 3493, 3500, 3507, 3514, 3521, 3528, 3535, 3542, 3549, 3556, 3563, 3570, 3577, 3584, 3591, 3598, 3605, 3612, 3619, 3626, 3633, 3640, 3647, 3654, 3661, 3668, 3675, 3682, 3689, 3696, 3703, 3710, 3717, 3724, 3731, 3738, 3745, 3752, 3759, 3766, 3773, 3780, 3787, 3794, 3801, 3808, 3815, 3822, 3829, 3836, 3843, 3850, 3857, 3864, 3871, 3878, 3885, 3892, 3899, 3906, 3913, 3920, 3927, 3934, 3941, 3948, 3955, 3962, 3969, 3976, 3983, 3990, 3997, 4004, 4011, 4018, 4025, 4032, 4039, 4046, 4053, 4060, 4067, 4074, 4081, 4088, 4095, 4102, 4109, 4116, 4123, 4130, 4137, 4144, 4151, 4158, 4165, 4172, 4179, 4186, 4193, 4200, 4207, 4214, 4221, 4228, 4235, 4242, 4249, 4256, 4263, 4270, 4277, 4284, 4291, 4298, 4305, 4312, 4319, 4326, 4333, 4340, 4347, 4354, 4361, 4368, 4375, 4382, 4389, 4396, 4403, 4410, 4417, 4424, 4431, 4438, 4445, 4452, 4459, 4466, 4473, 4480, 4487, 4494, 4501, 4508, 4515, 4522, 4529, 4536, 4543, 4550, 4557, 4564, 4571, 4578, 4585, 4592, 4599, 4606, 4613, 4620, 4627, 4634, 4641, 4648, 4655, 4662, 4669, 4676, 4683, 4690, 4697, 4704, 4711, 4718, 4725, 4732, 4739, 4746, 4753, 4760, 4767, 4774, 4781, 4788, 4795, 4802, 4809, 4816, 4823, 4830, 4837, 4844, 4851, 4858, 4865, 4872, 4879, 4886, 4893, 4900, 4907, 4914, 4921, 4928, 4935, 4942, 4949, 49

02. 11. 1952

01 0310

Richard Hughes

3. *... of ...*

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

McClung, J. M.

DAY-BOOK,

O. R.

JOURNAL.

Day-Book. I.

Accounts-debtor to merchandize.

Sold.

August 1. 1762.

3	Richard Hughs,				
	29½ ells linnen at	—	—	s. 3—2	605
	ditto	—	—	—	
3	Anthony Coule,				
	58½ ells linnen, at	—	—	s. 2—4	616
	ditto	—	—	—	
3	John Gray and company,				
	3 doz. scissars, at	4—0	—	l. 0—12—0	
	3 doz. ditto	3—9	—	0—11—3	
	6 doz. round points, at	3—9	—	1—02—6	
	6 doz. middling	2—8	—	0—16—0	
	ditto 10	—	—	—	301
3	Richard Hughs,				
	3 masses of pearl, at	—	—	l. 0—2—6	007

Merchandize sold 1610

Book-Keeping.
Day-Book. 2.

215

Accounts debtor to merchandize.

l. s. d.

Sold.

August 17. 1762.

Thomas Wilson,

2 doz. scissars	4-3	1-4-12-6
6 doz. middling	4-3	1-05-6
9 doz. ditto	2-8	1-04-0
20 doz. small	1-6	1-10-0

8 13 00

ditto 20

Anthony Coule,

looking glafs	1-0-08-6
ditto middling	0-09-6
portoise shell combs	0-06-0

1 04 00

ditto 23

Henry Trap,

doz. scissars with cafes	1-0-09-6
doz. without cafes	0-05-6

0 15 00

Sold.

August 27. 1762.

Richard Hughes,

3 pair scissars half barb	1-0-06-0
1 doz. ditto, small set	0-05-0
2 knives at 20d	0-03-4
1 doz. comb-brushes	0-03-0
6 pen knives at 8d	0-04-0
2 doz. clasp knives	1-17-0
4 doz. knives horn handed	3-00-0

5 18 04

Merchandize sold

16 10 04

Book-Keeping. Day-Book.

Accompts debtor to merchandize.

Sold.

August 31. 1762.

1 Receipts in ready money for goods since } 42 18
the 1st of August } ————

0-10-1 ————

0-10-1 ————

0-10-1 ————

September 3. 1762.

14 Henry Trap,

A parcel of scissars ———— 0 12

ditto 6 ————

3 Richard Hughs,

2 masses of pearl, at ———— 7. 2-6 006

ditto 11 ————

3 Richard Hughs,

13 ells cloth, at ———— 7. 2-6 1 12

ditto 15 ————

3 Anthony Coule,

4 masses pearl 2-6 1. 0-10-0

1½ doz. pendants 4-6 0-06-0

ditto 16 ————

4 Henry Trap,

12 doz. horn trum pets, 2 7. 1-1-4

2 doz. comb brushes, 3 0-06-0

2 doz. ditto, 2 0-04-0

Merchandize sold ———— 47 18

Day-Book. 4.

Accompts debtor to merchandize.

l. s. d.

Sold.

September 30. 1762.

John Biddy,

3 masses Ven. pearl, at	l.	1	00	0
2 doz. scissars, at	—	0	09	0
3 doz. fine combs, at	—	1	09	0
				2 18 00

— ditto —

John Gray and company.

piece white gauze qt. 24 ells	—	—	—	—
piece — ditto	22	—	—	—
piece — ditto	20	—	—	—
piece — ditto	18	—	—	—
piece yellow ditto	20	—	—	—
piece black ditto	19	—	—	—

Ells — 123 at 21d

10 15 03

— ditto —

Receipts in ready money for goods since	}	38	6	06
the 1st of September ———				

October 2. 1762.

Thomas Wilson,

doz. scissars with cases, at l.	0	12	0
masses pearl, at 2s	0	08	0
masses ditto, at —	3	17	4
			4 17 04

Merchandize sold — 56 17 01

T

Book-Keeping.
Day-Book. 3.

Accompts debtor to merchandize.

Sold.

October 29. 1762.

Thomas Wilfon,

2 pieces tabby, qt. 61	}	L.	25	18	6
ells—8s 6d					
1 piece ditto, qt. 28	}		11	18	6
ells—8s 6d					

37 16

ditto 31

Receipts in ready money for goods
since the 1st of October

86 11

Merchandize sold

124 07

Book-Keeping

THE

LEDGER

ALPHABET.

B		M	
ell, Germain	2	Merchandize	1
dy, John	4	Mason, George	2
ance	4		
C		P	
le, Anthony	3	Profit and los	4
h	1		
E		R	
pen. and abatem.	1	Rept. and paym. cash	1
		Richards, Thomas	2
F		S	
r, John	2	Stock	1
G		T	
y, John and comp.	3	Trap, Henry	4
H		W	
ghs, Richard	3	Wilson, Thomas	3

Ledger. i.

1762		Stock—Debtor.	
Aug.	2	To sundry to whom I owe—	110 00
Oct.	31	To balance N. stock	4 68 5 11
			79 5 11

1762		Merchandise, Debtor.	
Aug.	1	To stock per inventory	1 520 00
Oct.	31	To P. and L. carried thither	4 97 10
			617 10

1762		Receipts or Cash, Debtor.	
Aug.	1	To stock, money per inventory	1 180 00
	31	To sundries per book, page 1	57 02
Sept.	30	To sundries	69 18
Oct.	31	To sundries	97 04
			404 07

1762		Expences, &c. Debtor.	
Oct.	3	To payment hereon since 1 Aug.	31 10

Ledger. r.

l. s. d.

Stock—Creditor.

By sundry per inventory	730	00	00
By profit and loss in 3 months	4	65	11
	795	11	00

Merchandise, Creditor.

By sundries sold, day-book	1	16	10	10
By sundries	2	16	10	04
By sundries	3	47	18	04
By sundries	4	56	17	01
By sundries	5	124	07	10
	262	14	05	
By bal. value of remains	4	354	15	07
	617	10	00	

Payments or Cash, Creditor.

By sundries per book	1	30	00	00
By sundries	1	15	00	00
By sundries	1	62	00	00
	107	00	00	
By balance, rest in cash	1	4	297	07
	404	07	01	

Expences, &c. Creditor.

By profit and loss carried there	4	31	15	00
----------------------------------	---	----	----	----

Book-Keeping.

Ledger. 2.

		/.		s.	
1762	George Mafon, Debtor,				
Aug. 1	To stock, now owing me	1	20	00	

1762	Germain Bell, Debtor.				
Aug. 1	To stock, due to me	1	10	00	

1762	Thomas Richards, Debtor,				
Aug. 23	To payment, to him	1	20	00	
Sept. 28	To ditto	1	10	00	
Oct. 25	To ditto	1	10	00	
	To balance now due to him		40	00	
			20	00	
			60	00	

1762	John Fair, Debtor,				
Aug. 31	To payment, to him	1	10	00	
Sept. 23	To ditto	1	5	00	
Oct. 29	To ditto	1	20	00	
	To balance now owing him	4	15	00	
			35	00	
			50	00	

Book-Keeping. Ledger. 2.

223

l. s. d.

George Mason, Creditor,

By receipt of him 1 10 00 00

By balance now owing to me 4 10 00 00

20 00 00

Germain Bell, Creditor,

By receipt of him 1 5 00 00

By balance now owing me 4 5 00 00

10 00 00

Thomas Richards, Creditor,

By stock now owing him 1 60 00 00

John Fair, Creditor,

By stock now due to him 1 50 00 00

Ledger. 3.

1762

Aug.

Richard Hughs, Debtor,

1 To merchandize sold him

10 To ditto

27 To ditto, a parcel

Sept.

6 To ditto, 3 masses of pearl

11 To ditto. 13 ells of cloth

l. s.

6 05

0 07

5 18

0 50

1 12

14 08

1762

Aug.

Anthony Coule, Debtor.

5 To merchandize sold him

20 To ditto, a parcel

Sept.

15 To ditto, a parcel

6 16

1 04

0 16

8 16

1762

Aug.

John Gray and comp. Debtor.

5 To merchandize, a parcel

Sept.

30 To ditto, a parcel

3 01

10 15

13 17

1762

Aug.

Thomas Wilfon, Debtor.

17 To merchandize, a parcel

Oct.

2 To ditto, a parcel

29 To ditto, a parcel

8 11

4 17

37 16

51 06

Book-Keeping.

225

Ledger. 3, 1861

Richard Hodge, Creditor,

By receipt of him — — — — —

By ditto — — — — —

By balance now owing me —

l. s. d.

4 00 00

8 15 11

12 15 11

1 12 6

14 8 5

Anthony Coule, Creditor,

By receipt of him — — — — —

By ditto — — — — —

By ditto — — — — —

Balance —

10 00

8 16 6

John Gray and comp. Creditor,

By receipt of them — — — — —

By ditto — — — — —

By ditto — — — — —

By balance now owing me —

1 10 6

2 00 3

5 15 3

9 06 00

4 11 00

13 17 00

Thomas Wilson, Creditor,

By receipt of him — — — — —

By balance now owing me —

4 13 00

4 46 13

51 06 10

Ledger 4

1762		Henry Trap, Debtor,		
Aug.	25	To merchandize, a parcel ————	1	0 18 00
Sept.	3	To ditto —————	1	0 12 00
	16	To ditto —————	1	1 13 00
		Balance now owing me		3 00 00
1762		John Biddy, Debtor,		
Sept.	30	To merchandize, a parcel ————	1	2 18 00
1762		Profit and loss, Debtor,		
Oct.	31	To expences, &c. brought here	2	31 19 00
		To stock gained since Aug. 1st	1	65 11 00
1762		Balance, Debtor,		
Oct.	31	To merchandize now remaining	1	354 16
		To receipts, or cash resting —	1	297 17
		To George Mason, now owing	2	10 00 00
		To Germain Bell, ditto ———	2	5 00 00
		To Richard Hughs, ditto — —	3	1 12
		To John Gray and comp. ditto	3	4 11 00
		To Thomas Wilson, ditto ———	3	46 13 00
		To Anthony Coule, ditto — —	3	08 10 00

Ledger. 4.

Henry Trap, Creditor,

By receipt of him

By ditto in full

L. s. d.

1 0 25 00

1 2 06 00

3 01 00

John Biddy, Creditor,

By receipt in full

1 2 18 00

Profit and loss, Creditor,

By merch. to close that account

1 97 10 00

Balance, Creditor,

By Thomas Richards, I owe him

By John Fair, ditto

2 20 00 00

2 15 00 00

35 00 00

By stock, for its neat

1 68 11 00

720 11 00

Directions for Book-keeping.

Quest. **H**AVING taught me how to state, post, and balance my books, what method must I use at the going out of these books into others?

Ans. From the balance of these books (see ledger fol. 4.) you must draw out another inventory, as follows:

The INVENTORY.

London, October 31. 1762.

I Have in merchandize of sundry } L. 354 16 07
 sorts, to the value of }
 In cash, or ready money — — 297 07 00

Owing to me, by

George Mason	— — —	10	00	00
Germain Bell	— — —	5	00	00
Richard Hughs	— — —	5	12	00
John Gray and company	— — —	4	11	00
Thomas Wilson	— — —	46	13	00
Anthony Coule	— — —	00	10	00
		720	11	00

Owing by me, to

Thomas Richards	L. 20	00	00
John Fair	— — —	15	00
		35	00
My neat stock	685	11	00

And post it into your new ledger, as by the directions given for the posting your other inventory.

Q. In the cash book, on debtor side (for instance in the month of August) are figures just before the money lines, as 1 before 180/ and 2 before 4/, &c. I desire to know what those figures shew.

The figure 1 (before 180/ in the first line) shews the folio of the ledger, on which the account of stock stands.

The figure 3 following *Richard Hughes*, in the next line, shews the folio of the ledger, whereon the account of *Richard Hughes* stands.

The like is to be understood of the figure 3 following *Anthony Coule*: the 3 following *John Gray* and company: the 3 following *Thomas Wilson*, and the 4 following *Henry Trap*, on debtor side of the said cash-book for the month of August, and of those on debtor side, of the said book for the months of September and October.

What do the figures (on the creditor side of the cash-book) which come just before the money lines shew? For instance, in the month of August on creditor side, of the figure 2 following *Thomas Richards* just before the 20/, and the 2 following *John Fair*, just before 10/.

The figure 2 following *Thomas Richards*, shews that his account stands in ledger, folio 2. And the 2 following *John Fair*, shews that his account stands also in the said ledger, folio 2.

The like is to be understood of the figures 2, 2 on debtor side of the cash book for September.

And of the figures 2, 2, 2 on creditor side of the cash book for October.

What does the L. 57 : 3 : 10, at the foot of the debtor side of the cash book for the month of August,

shew the total sum received during the month of August, and is produced by subtracting the 180/ in first line from the L. 237 : 3 : 10, on the debtor side account.

The like is to be understood of the L. 69 : 18 : 8, at the foot of September, and of the L. 97 : 8 : 7, at the foot of October.

And as those sums shew the total receipt during each month, so the sum 30/ on credit side of the cash book for August, the sum of 15/ for September, and the 62/ for October, shew the total payment during each of those months.

Q How is the balance (or rest of money) in cash found.

A You must subtract the 30 l (on credit of August's cash book) from the L. 237 : 10, on the debit side, and the remainder being L. 207 : 3 : 18, the balance, or rest of money, in cash, which placed under the 30 l paid, and added to it, makes a just balance with the debtor side. See the cash book for the month of August.

You are to do in the like manner to find the balance, or rests of cash for the months of September and October. See the cash book for these months.

Q What does figure 3 against Richard Hughs (in the day book) and the 3 against Anthony Coule, and the other figures in the margin of the day book, shew.

A They shew the folios of the ledger whereon the account of Richard Hughs, Anthony Coule, and the other accounts stand.

And also shew that these persons or accounts are debtors; as the figure 1 under the small line of the margin and at the foot of each page of the day book, just against the words merchandize sold, shews that the account of merchandize stands in the ledger, on folio 1 and is creditor.

Q What do the figures in the ledger coming just before the money lines on debtor side, shew.

A As the words of each line on the debtor side of the ledger, immediately following the word to, shews what accounts or persons are to be credited, or counterpaid, so those figures shew on what folios in the ledger those accounts or persons are to be found.

Q What do the figures coming just before the key lines on the creditor side of the ledger shew.

A As the words in each line on creditors side of the said ledger immediately following the word by, shew what accounts or persons are debited or counterpaid, so those figures shew on what folios in the ledger the accounts or persons are to be found.

Q How must I enter the goods I buy.

A You must enter them in a bought book: as instance.

This
posted i
the perf
and the
posted i
chandize
Q I h
keeping
concerne
particula
No 1.
the acc
when, of
2. WH
of the ch
3. The
or los
4. Wha
whom.
in full.
5. Wha
g the w
quently t
6. For
ates, and
7. For
hat date
8. Whe
m to m

Merchandize debtor to persons.

Bought

Of (suppose) Richard Thomas, viz.

56 ells linnen, at 3s } L. 6—18—0

per ell . . .

52 ells ditto, at 4s } 10—08—0

per ell . . .

L. 17—6—0

This article (and others of the like nature) must be posted in your ledger, to the credit of the account of the persons of whom bought, here Richard Thomas: and the total of each page in the bought book, must be posted in the said ledger to the debit of account of merchandize.

I have been told that a good method of book-keeping will shew the owner of the books or others concerned, these following necessary (and many other) particulars, viz.

Concerning merchandize.

No 1. What goods (during the whole, or any time of the account) have been bought, brought into charge, when, of whom, and at what prices.

2. What goods (as above) have been sold, issued out of the charge, when, to whom, and at what price.

3. The whole quantity bought and sold, and the profit, or loss, arising on those so disposed of.

Concerning cash or money.

4. What sums of money have been received (as above) of whom, and on whose account. Also whether in part or in full.

5. What sum total has been received and paid (during the whole) or during any time as above, and consequently the sum resting in cash.

Concerning persons with whom I deal.

6. For what sums they stand indebted, from what dates, and for what.

7. For what sums I stand indebted to them, from what dates, and for what.

8. Whether any balance, or remainder, be due from them to me, or from me to them, and what sum.

Concerning my expences.

9. What expence I have been at (during the time of the accompt, or any part of it) and such expence considered and allowed; then what neat gain or loss has attended.

Concerning my stock.

10. What stock I began with, and what my present stock is, and what particulars composed each.

Now I desire you to shew me how this method will answer all these particulars.

A Concerning merchandize, your bought book will shew you the particular demands of numb. 1.

And your day book those in numb. 2.

The debtor side of accompt of merchandize in your ledger will shew the whole quantity bought, and its creditor side the whole quantity sold, and the same accompt shews you also the profit and loss arising on those you have disposed of. See the accompt of merchandize in ledger, folio. 1. thus the demands of number 3. are shewn.

Concerning cash or money, the debtor side of your cash book answers the demands in number 4. and the creditor side of the said book shews the demands in number 5, and consequently those in number 6. by comparing the debtor and creditor sides.

The creditor side also of the said book, shews the balance (or rest that should be found) in cash.

Concerning persons with whom you deal.

The debtor sides of their accompts shew the demands of number 6. and creditor sides those of number 7.

And consequently their accompts compared in debtor and creditor, shew the demands of number 8.

Concerning your expences.

The accompt of expences in your ledger shews your expences, as in number 9. and the accompt of profit and loss, will shew the neat gain or loss.

Concerning your stock.

The accompt of stock in your ledger shews what you began with, and the accompt of balance shews your present stock, and of what particulars it consists, and answers the demands in number 10.

The

Nu

Accounts may be kept up for buying or selling any Commodity by number, Weight, or Measure.

100
200
300
400
500
600
700
800
900
1000
2000
3000
4000
5000
10000

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Accompts ready cast up for buying or selling any Commodity by number, Weight, or Measure.

Numb.	1 Farthing.				2 Farthings.				3 Farthings.			
	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.
1	0	0	0	0	1	0	0	0	2	0	0	0
2	0	0	0	0	2	0	0	0	3	0	0	0
3	0	0	0	0	3	0	0	0	4	0	0	0
4	0	0	0	0	4	0	0	0	5	0	0	0
5	0	0	0	0	5	0	0	0	6	0	0	0
6	0	0	0	0	6	0	0	0	7	0	0	0
7	0	0	0	0	7	0	0	0	8	0	0	0
8	0	0	0	0	8	0	0	0	9	0	0	0
9	0	0	0	0	9	0	0	0	10	0	0	0
10	0	0	0	0	10	0	0	0	11	0	0	0
20	0	0	0	0	20	0	0	0	22	0	0	0
30	0	0	0	0	30	0	0	0	33	0	0	0
40	0	0	0	0	40	0	0	0	44	0	0	0
50	0	0	0	0	50	0	0	0	55	0	0	0
60	0	0	0	0	60	0	0	0	66	0	0	0
70	0	0	0	0	70	0	0	0	77	0	0	0
80	0	0	0	0	80	0	0	0	88	0	0	0
90	0	0	0	0	90	0	0	0	99	0	0	0
100	0	0	0	0	100	0	0	0	110	0	0	0
200	0	0	0	0	200	0	0	0	220	0	0	0
300	0	0	0	0	300	0	0	0	330	0	0	0
400	0	0	0	0	400	0	0	0	440	0	0	0
500	0	0	0	0	500	0	0	0	550	0	0	0
600	0	0	0	0	600	0	0	0	660	0	0	0
700	0	0	0	0	700	0	0	0	770	0	0	0
800	0	0	0	0	800	0	0	0	880	0	0	0
900	0	0	0	0	900	0	0	0	990	0	0	0
1000	1	0	0	0	1000	2	0	0	1100	3	0	0
2000	2	0	0	0	2000	4	0	0	2200	6	0	0
3000	3	0	0	0	3000	6	0	0	3300	9	0	0
4000	4	0	0	0	4000	8	0	0	4400	12	0	0
5000	5	0	0	0	5000	10	0	0	5500	15	0	0
6000	6	0	0	0	6000	12	0	0	6600	18	0	0
7000	7	0	0	0	7000	14	0	0	7700	21	0	0
8000	8	0	0	0	8000	16	0	0	8800	24	0	0
9000	9	0	0	0	9000	18	0	0	9900	27	0	0
10000	10	0	0	0	10000	20	0	0	11000	30	0	0

The Price of the Commodity by the Tun, Hundred,
Pound, Ounce, Dozen, Yard, Ell, Sec.

Numb.	1 Penny.			2 Pence.			3 Pence.		
	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	0	0	1	0	0	2	0	0	3
2	0	0	2	0	0	4	0	0	6
3	0	0	3	0	0	6	0	0	9
4	0	0	4	0	0	8	0	1	0
5	0	0	5	0	0	10	0	1	3
6	0	0	6	0	1	0	0	1	6
7	0	0	7	0	1	2	0	1	9
8	0	0	8	0	1	4	0	2	0
9	0	0	9	0	1	6	0	2	3
10	0	0	10	0	1	8	0	2	6
20	0	1	8	0	3	4	0	5	0
30	0	2	6	0	5	0	0	7	6
40	0	3	4	0	6	8	0	10	0
50	0	4	2	0	8	4	0	12	6
60	0	5	0	0	10	0	0	15	0
70	0	5	10	0	11	8	0	17	6
80	0	6	8	0	13	4	1	0	0
90	0	7	6	0	15	0	1	2	6
100	0	8	4	0	16	8	1	5	0
200	0	16	8	1	13	4	2	10	0
300	1	5	0	2	10	0	3	15	0
400	1	13	4	3	6	8	5	0	0
500	2	1	8	4	3	4	6	5	0
600	2	10	0	5	0	0	7	10	0
700	2	18	4	5	16	8	8	15	0
800	3	6	8	6	13	4	10	0	0
900	3	15	0	7	10	0	11	5	0
1000	4	3	4	8	6	8	12	10	0
2000	8	6	8	16	13	4	25	0	0
3000	12	10	0	25	0	0	37	10	0
4000	16	13	4	33	6	8	50	0	0
5000	20	16	8	41	13	4	62	10	0
10000	41	13	4	83	6	0	125	0	0

The Quantity of the Commodity to be bought or sold.

The Quantity of the Commodity to be bought or sold.

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Numb.	4 Pence.				5 Pence.				6 Pence.			
	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0	0	0	0	0	0
400	0	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0	0
600	0	0	0	0	0	0	0	0	0	0	0	0
700	0	0	0	0	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0	0	0	0	0
900	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0
3000	0	0	0	0	0	0	0	0	0	0	0	0
4000	0	0	0	0	0	0	0	0	0	0	0	0
5000	0	0	0	0	0	0	0	0	0	0	0	0
10000	0	0	0	0	0	0	0	0	0	0	0	0

The Quantity of the Commodity to be bought or sold.

The Price of the Commodity by the Tun, Hundred
 Pound, Ounce, Dozen, Yard, Ell, &c.

Numb.	7 Pence			8 Pence			9 Pence		
	l.	s.	d.	l.	s.	d.	l.	s.	d.
0	0	0	0	0	0	0	0	0	0
1	0	1	0	0	1	0	0	1	0
2	0	2	0	0	2	0	0	2	0
3	0	3	0	0	3	0	0	3	0
4	0	4	0	0	4	0	0	4	0
5	0	5	0	0	5	0	0	5	0
6	0	6	0	0	6	0	0	6	0
7	0	7	0	0	7	0	0	7	0
8	0	8	0	0	8	0	0	8	0
9	0	9	0	0	9	0	0	9	0
10	0	10	0	0	10	0	0	10	0
11	0	11	0	0	11	0	0	11	0
12	0	12	0	0	12	0	0	12	0
13	0	13	0	0	13	0	0	13	0
14	0	14	0	0	14	0	0	14	0
15	0	15	0	0	15	0	0	15	0
16	0	16	0	0	16	0	0	16	0
17	0	17	0	0	17	0	0	17	0
18	0	18	0	0	18	0	0	18	0
19	0	19	0	0	19	0	0	19	0
20	0	20	0	0	20	0	0	20	0
21	0	21	0	0	21	0	0	21	0
22	0	22	0	0	22	0	0	22	0
23	0	23	0	0	23	0	0	23	0
24	0	24	0	0	24	0	0	24	0
25	0	25	0	0	25	0	0	25	0
26	0	26	0	0	26	0	0	26	0
27	0	27	0	0	27	0	0	27	0
28	0	28	0	0	28	0	0	28	0
29	0	29	0	0	29	0	0	29	0
30	0	30	0	0	30	0	0	30	0
31	0	31	0	0	31	0	0	31	0
32	0	32	0	0	32	0	0	32	0
33	0	33	0	0	33	0	0	33	0
34	0	34	0	0	34	0	0	34	0
35	0	35	0	0	35	0	0	35	0
36	0	36	0	0	36	0	0	36	0
37	0	37	0	0	37	0	0	37	0
38	0	38	0	0	38	0	0	38	0
39	0	39	0	0	39	0	0	39	0
40	0	40	0	0	40	0	0	40	0
41	0	41	0	0	41	0	0	41	0
42	0	42	0	0	42	0	0	42	0
43	0	43	0	0	43	0	0	43	0
44	0	44	0	0	44	0	0	44	0
45	0	45	0	0	45	0	0	45	0
46	0	46	0	0	46	0	0	46	0
47	0	47	0	0	47	0	0	47	0
48	0	48	0	0	48	0	0	48	0
49	0	49	0	0	49	0	0	49	0
50	0	50	0	0	50	0	0	50	0
51	0	51	0	0	51	0	0	51	0
52	0	52	0	0	52	0	0	52	0
53	0	53	0	0	53	0	0	53	0
54	0	54	0	0	54	0	0	54	0
55	0	55	0	0	55	0	0	55	0
56	0	56	0	0	56	0	0	56	0
57	0	57	0	0	57	0	0	57	0
58	0	58	0	0	58	0	0	58	0
59	0	59	0	0	59	0	0	59	0
60	0	60	0	0	60	0	0	60	0
61	0	61	0	0	61	0	0	61	0
62	0	62	0	0	62	0	0	62	0
63	0	63	0	0	63	0	0	63	0
64	0	64	0	0	64	0	0	64	0
65	0	65	0	0	65	0	0	65	0
66	0	66	0	0	66	0	0	66	0
67	0	67	0	0	67	0	0	67	0
68	0	68	0	0	68	0	0	68	0
69	0	69	0	0	69	0	0	69	0
70	0	70	0	0	70	0	0	70	0
71	0	71	0	0	71	0	0	71	0
72	0	72	0	0	72	0	0	72	0
73	0	73	0	0	73	0	0	73	0
74	0	74	0	0	74	0	0	74	0
75	0	75	0	0	75	0	0	75	0
76	0	76	0	0	76	0	0	76	0
77	0	77	0	0	77	0	0	77	0
78	0	78	0	0	78	0	0	78	0
79	0	79	0	0	79	0	0	79	0
80	0	80	0	0	80	0	0	80	0
81	0	81	0	0	81	0	0	81	0
82	0	82	0	0	82	0	0	82	0
83	0	83	0	0	83	0	0	83	0
84	0	84	0	0	84	0	0	84	0
85	0	85	0	0	85	0	0	85	0
86	0	86	0	0	86	0	0	86	0
87	0	87	0	0	87	0	0	87	0
88	0	88	0	0	88	0	0	88	0
89	0	89	0	0	89	0	0	89	0
90	0	90	0	0	90	0	0	90	0
91	0	91	0	0	91	0	0	91	0
92	0	92	0	0	92	0	0	92	0
93	0	93	0	0	93	0	0	93	0
94	0	94	0	0	94	0	0	94	0
95	0	95	0	0	95	0	0	95	0
96	0	96	0	0	96	0	0	96	0
97	0	97	0	0	97	0	0	97	0
98	0	98	0	0	98	0	0	98	0
99	0	99	0	0	99	0	0	99	0
100	0	100	0	0	100	0	0	100	0
101	0	101	0	0	101	0	0	101	0
102	0	102	0	0	102	0	0	102	0
103	0	103	0	0	103	0	0	103	0
104	0	104	0	0	104	0	0	104	0
105	0	105	0	0	105	0	0	105	0
106	0	106	0	0	106	0	0	106	0
107	0	107	0	0	107	0	0	107	0
108	0	108	0	0	108	0	0	108	0
109	0	109	0	0	109	0	0	109	0
110	0	110	0	0	110	0	0	110	0
111	0	111	0	0	111	0	0	111	0
112	0	112	0	0	112	0	0	112	0
113	0	113	0	0	113	0	0	113	0
114	0	114	0	0	114	0	0	114	0
115	0	115	0	0	115	0	0	115	0
116	0	116	0	0	116	0	0	116	0
117	0	117	0	0	117	0	0	117	0
118	0	118	0	0	118	0	0	118	0
119	0	119	0	0	119	0	0	119	0
120	0	120	0	0	120	0	0	120	0
121	0	121	0	0	121	0	0	121	0
122	0	122	0	0	122	0	0	122	0
123	0	123	0	0	123	0	0	123	0
124	0	124	0	0	124	0	0	124	0
125	0	125	0	0	125	0	0	125	0
126	0	126	0	0	126	0	0	126	0
127	0	127	0	0	127	0	0	127	0
128	0	128	0	0	128	0	0	128	0
129	0	129	0	0	129	0	0	129	0
130	0	130	0	0	130	0	0	130	0
131	0	131	0	0	131	0	0	131	0
132	0	132	0	0	132	0	0	132	0
133	0	133	0	0	133	0	0	133	0
134	0	134	0	0	134	0	0	134	0
135	0	135	0	0	135	0	0	135	0
136	0	136	0	0	136	0	0	136	0
137	0	137	0	0	137	0	0	137	0
138	0	138	0	0	138	0	0	138	0
139	0	139	0	0	139	0	0	139	0
140	0	140	0	0	140	0	0	140	0
141	0	141	0	0	141	0	0	141	0
142	0	142	0	0	142	0	0	142	0
143	0	143	0	0	143	0	0	143	0
144	0	144	0	0	144	0	0	144	0
145	0	145	0	0	145	0	0	145	0
146	0	146	0	0	146	0	0	146	0
147	0	147	0	0	147	0	0	147	0
148	0	148	0	0	148	0	0	148	0
149	0	149	0	0	149	0	0	149	0
150	0	150	0	0	150	0	0	150	0
151	0	151	0	0	151	0	0	151	0
152	0	152	0	0	152	0	0	152	0
153	0	153	0	0	153	0	0	153	0
154	0	154	0	0	154	0	0	154	0
155	0	155	0	0	155	0	0	155	0
156	0	156	0	0	156	0	0	156	0
157	0	157	0	0	157	0	0	157	0
158	0	158	0	0	158	0	0	158	0
159	0	159	0	0	159	0	0	159	0
160	0	160	0	0	160	0	0	160	0
161	0	161	0	0	161	0	0	161	0
162	0	162	0	0	162	0	0	162	0
163	0	163	0	0	163	0	0	163	0
164	0	164	0	0	164	0	0	164	0
165	0	165	0	0	165	0	0	165	0
166	0	166	0	0	166	0	0	166	0
167	0	167	0	0	167	0	0	167	0
168	0	168	0	0	168	0	0	168	0
169	0	169	0	0	169	0	0	169	0
170	0	170	0	0	170	0	0	170	

Accompts ready call up.

237

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb	10 Pence.			11 Pence.		
	l.	s.	d.	l.	s.	d.
1	0	0	10	0	10	11
2	0	1	8	0	1	10
3	0	2	6	0	2	9
4	0	3	4	0	3	8
5	0	4	2	0	4	7
6	0	5	0	0	5	6
7	0	5	10	0	6	5
8	0	6	8	0	7	4
9	0	7	6	0	8	3
10	0	8	4	0	9	2
20	0	16	8	0	18	4
30	1	5	0	1	7	6
40	1	13	4	1	16	8
50	2	1	8	2	5	10
60	2	10	0	2	13	0
70	2	18	4	3	4	2
80	3	6	8	3	13	4
90	3	15	0	4	2	6
100	4	3	4	4	11	8
200	8	6	8	9	3	4
300	12	10	0	13	15	0
400	16	14	4	18	6	8
500	20	18	8	22	18	4
600	24	0	0	27	10	0
700	28	14	4	32	1	8
800	32	6	8	36	13	4
900	37	10	0	41	5	0
1000	41	13	4	45	16	8
2000	83	6	8	91	3	4
3000	125	0	0	137	10	0
4000	166	13	4	183	6	8
5000	208	6	8	229	3	4
10000	417	13	4	458	0	0

The Quantity of the Commodity to be bought or sold.

The Price of the Commodity by the Tun, Hundred
 Pound, Ounce, Dozen, Yard, Ell, &c.

The Quantity of the Commodity to be bought or sold.

Numb	1 Shilling		2 Shillings		3 Shillings	
	l.	s.	l.	s.	l.	s.
1	0	1	0	2	0	3
2	0	2	0	4	0	6
3	0	3	0	6	0	9
4	0	4	0	8	0	12
5	0	5	0	10	0	15
6	0	6	0	12	0	18
7	0	7	0	14	1	1
8	0	8	0	16	1	2
9	0	9	0	18	1	3
10	0	10	1	0	1	4
20	1	0	2	0	3	0
30	1	10	3	0	4	10
40	2	0	4	0	6	0
50	2	10	5	0	7	10
60	3	0	6	0	9	0
70	3	10	7	0	10	10
80	4	0	8	0	12	0
90	4	10	9	0	13	10
100	5	0	10	0	15	0
200	10	0	20	0	30	0
300	15	0	30	0	45	0
400	20	0	40	0	60	0
500	25	0	50	0	75	0
600	30	0	60	0	90	0
700	35	0	70	0	105	0
800	40	0	80	0	120	0
900	45	0	90	0	135	0
1000	50	0	100	0	150	0
2000	100	0	200	0	300	0
3000	150	0	300	0	450	0
4000	200	0	400	0	600	0
5000	250	0	500	0	750	0
10000	500	0	1000	0	1500	0

The Quantity of the Commodity to be bought or sold.

Accompts ready call up.

239

The Price of the Commodity by the Tun, Hundred, Pound, Ounce, Dozen, Yard, Ell, &c.

Numb	4 Shillings		5 Shillings		6 Shillings	
	l.	s.	l.	s.	l.	s.
1	0	4	0	5	0	6
2	0	8	0	10	0	12
3	0	12	0	15	0	18
4	0	16	1	0	1	4
5	1	0	1	5	1	10
6	1	4	1	10	1	16
7	1	8	1	15	2	2
8	1	12	2	0	2	8
9	1	16	2	5	2	14
10	2	0	2	10	3	0
20	4	0	5	0	6	0
30	6	0	7	10	9	0
40	8	0	10	0	12	0
50	10	0	12	10	15	0
60	12	0	15	0	18	0
70	14	0	17	10	21	0
80	16	0	20	0	24	0
90	18	0	22	10	27	0
100	20	0	25	0	30	0
200	40	0	50	0	60	0
300	60	0	75	0	90	0
400	80	0	100	0	120	0
500	100	0	125	0	150	0
600	120	0	150	0	180	0
700	140	0	175	0	210	0
800	160	0	200	0	240	0
900	180	0	225	0	270	0
1000	200	0	250	0	300	0
2000	400	0	500	0	600	0
3000	600	0	750	0	900	0
4000	800	0	1000	0	1200	0
5000	1000	0	1250	0	1500	0
10000	2000	0	2500	0	3000	0

The Quantity of the Commodity to be bought or sold.

The Quantity of the Commodity to be bought or sold.

The Price of the Commodity by the Tun, Hundred
 Pound, Ounce, Dozen, Yard, Ell, &c.

Numb	7 Shillings		8 Shillings		9 Shillings		10 Shil.	
	l.	s.	l.	s.	l.	s.	l.	s.
1	0	7	0	8	0	9	0	10
2	0	14	0	16	0	18	1	0
3	0	21	1	4	1	7	1	10
4	0	28	1	12	1	16	2	0
5	1	5	2	0	2	5	2	10
6	1	12	2	8	2	14	3	0
7	1	19	2	16	3	3	3	10
8	1	26	3	4	3	11	4	0
9	1	33	3	12	4	1	4	10
10	2	0	4	0	4	10	5	0
20	4	0	8	0	9	0	10	0
30	6	0	12	0	13	10	15	0
40	8	0	16	0	18	0	20	0
50	10	0	20	0	22	10	25	0
60	12	0	24	0	27	0	30	0
70	14	0	28	0	31	10	35	0
80	16	0	32	0	36	0	40	0
90	18	0	36	0	40	10	45	0
100	20	0	40	0	45	0	50	0
200	40	0	80	0	90	0	100	0
300	60	0	120	0	135	0	150	0
400	80	0	160	0	180	0	200	0
500	100	0	200	0	225	0	250	0
600	120	0	240	0	270	0	300	0
700	140	0	280	0	315	0	350	0
800	160	0	320	0	360	0	400	0
900	180	0	360	0	405	0	450	0
1000	200	0	400	0	450	0	500	0
2000	400	0	800	0	900	0	1000	0
3000	600	0	1200	0	1350	0	1500	0
4000	800	0	1600	0	1800	0	2000	0
5000	1000	0	2000	0	2250	0	2500	0
10000	2000	0	4000	0	4500	0	5000	0

The Quantity of the Commodity to be bought or sold.

Price
 Po

No.

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 20
 30
 40
 50
 60
 70
 80
 90
 100
 200
 300
 400
 500
 600
 700
 800
 900
 1000
 2000
 3000
 4000
 5000
 10000

Price of the Commodity by the Tun, Hundred,
Pound, Ounce, Dozen, Yard, Ell, &c.

No.	1 Lib.	2 Lib.	3 Lib.	4 Lib.	5 Lib.
	l.	l.	l.	l.	l.
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25
6	6	12	18	24	30
7	7	14	21	28	35
8	8	16	24	32	40
9	9	18	27	36	45
10	10	20	30	40	50
20	20	40	60	80	100
30	30	60	90	120	150
40	40	80	120	160	200
50	50	100	150	200	250
60	60	120	180	240	300
70	70	140	210	280	350
80	80	160	240	320	400
90	90	180	270	360	450
100	100	200	300	400	500
200	200	400	600	800	1000
300	300	600	900	1200	1500
400	400	800	1200	1600	2000
500	500	1000	1500	2000	2500
600	600	1200	1800	2400	3000
700	700	1400	2100	2800	3500
800	800	1600	2400	3200	4000
900	900	1800	2700	3600	4500
1000	1000	2000	3000	4000	5000
2000	2000	4000	6000	8000	10000
3000	3000	6000	9000	12000	15000
4000	4000	8000	12000	16000	20000
5000	5000	10000	15000	20000	25000
10000	10000	20000	30000	40000	50000

The use of the foregoing Tables.

THese tables will serve for many uses ; but that which they'll be most used about, as being most necessary is to find out the true account of any number of ell yards, or pounds, being sold for so much the ell, yard or pound.

Example. What will 5000 ells of linnen, at 11 per the ell come to ? To find this, First look to the price the ell at the head of the table, then look down the side of the table for the number of ells, so you shall find in the last column but one in the table, and in the last line but one thereof that 5000 of any thing at 11 pence piece, comes to 229*l.* 3*s.* 4*d.*

If you cannot find your price in one column, or number of things in one line, you must take two or three parts thereof, and add them together.

Another Example.

What will 1500 ells, at 9½ come to
In the table of nine pences you find,

	l.	s.
For 1000 nine pences	37	10
For 500 nine pences	18	15
In the table of half pence,		
For 1000 halfpence	2	1
For 500 halfpence	1	0

59 7

A Compleat

COMPENDIUM OF GEOGRAPHY;

Describing all the

Empires, Kingdoms, and Dominions,

In The

Whole WORLD.

Shewing their

Locality, Situation, Dimensions, Religions, Languages,
Commodities, Divisions, Rivers, Mountains, Lakes,
&c. &c.

To which is prefixed,

A Method for learning Geography without a Master, for
the Use of such grown Persons as have neglected
this useful Study in their Youth.

And also,

Able shewing the Parallel of Latitude, the Breadth,
and the Length of the Day in every Climate.

In a most plain and easy Method.

To learn Geography without the Directions of a Master

THE person who desires to learn Geography, must have a set of maps, and after reading over the description of each empire, &c. he should be very exact in finding out in the map, the several places mentioned therein; and thus by reading each article several times over, and comparing them with the maps, any grown person may soon know the most remarkable places in the world, their situation, boundaries, &c. and will infallibly, by degrees remember the names of them.

The following maps, which may be purchased at small expence may be sufficient to instruct any reader and render this treatise easy and intelligibly, viz.

The World, Europe, Asia, Africa, North America, South America, England, Scotland and Ireland.

'Tis highly necessary, that the different parts of each of those maps should be distinguished by different colours or at least by points or lines.

A Table shewing the Parallel of Latitude, the Breadth and the Length of the Day in every Climate.

Climates	Climates betwixt the Equator and the Polar Circles						
	Paral.	Bdth	Day.	Clim	Paral.	Bdth	Day
	D. M.	D. M.	H. M.		D. M.	D. M.	H.
1	8 34	8 34	12 30	13	59 59	1 33	18
2	16 43	8 09	13 00	14	62 18	1 19	19
3	24 11	7 28	13 30	15	62 25	1 07	19
4	30 47	6 36	14 00	16	63 23	0 52	20
5	36 59	5 41	14 30	17	64 16	0 53	20
6	41 22	4 52	15 00	18	64 55	0 39	21
7	45 29	4 07	15 30	19	65 25	0 30	21
8	49 01	3 32	16 00	20	65 47	0 22	22
9	51 58	2 57	16 30	21	66 06	0 19	22
10	54 29	2 31	17 00	22	66 20	0 14	23
11	56 37	2 12	17 30	23	66 28	0 08	23
12	58 26	1 49	18 00	24	66 31	0 03	24
Climates between the Polar Circles and the Pole							
1	67 31	1 00	1 Mo	4	78 20	5 00	4
2	69 31	2 00	2 Mo	5	84 00	5 40	5
3	73 21	3 50	3 Mo	6	90 00	6 00	6

Description of the World.

Geography is a science which teacheth the description of the earth. It differs from Cosmography as a part from the whole, and from Chronography and Topography as the whole from its parts. The earth is a spherical body, which together with the water make up one globe of so perfect and exact a form, and so beautified and adorned by the God of nature, that from its elegance and beauty, it was called by the Greeks *Kogkos*, and by the Latins *Mundus*.

It is situate according to Ptolomy and Tycho, in the center of the universe, but according to Copernicus, between the orbits of Mars and Venus; its substance so wonderful, as may well express that unlimited power that performs infinitely beyond our imagination. As to its magnitude, it is 21600 miles in circuit, (according to the vulgar account 60 to a degree) diameter 6874 miles; its semidiameter 3436; its superficies in square miles 148510584, and its solid content 169921796242 cubical miles. For the better understanding all its parts; it may be divided into four general heads, viz. 1. Its imaginary parts; 2. its real parts; 3. in respect to its inhabitants; 4. its national parts.

1. Imaginary Parts.

The imaginary parts are only supposed, for the clearer understanding of this science; they are, 1. Poles, 2. Meridians, 3. Zones, and, 4. Climates.

1. The poles are the extreame points of the axis which is supposed to pass through the center of the earth, and on which it is supposed to move daily about. They answer to the poles of the heavens (as the other imaginary parts) being the farthest distant from the Equator; in number two, viz. 1. The arctic, or north pole; and, 2. The antarctic, or south pole.

2. The circles are divided into the greater and lesser: the greater divide the world into two equal parts, number four, viz. 1. The equator, compassing the earth equally between, and farthest from the poles; when the sun is here, the days and nights are equal. 2. The Zodiac (in which is the Ecliptic) cutting the Equator obliquely, through which the sun passes in a year. These two are immovable. 3. The horizon, dividing the visible parts of the heavens from the invisible. 4. The Meridian, dividing the horizon into two equal parts, when the sun is here it is noon. These two are movable.

The lesser circles divide the world into two unequal parts; they are, 1. The Tropics, which terminate the sun's distance from the equator, being 23 degrees and half from it: when the sun is here it is either summer or winter. They are two, viz. of Cancer on the north and of Capricorn on the south side of the equator. 2. The polar Circles, 66 degrees and one half of the equator, and 23 and one half of the poles; they are called the Arctic and Antarctic circles. 3. The Parallels, which are parallel to the Equator, set in maps to shew the latitude, as the meridian lines are to shew the longitude of places. (Note, That the latitude is the distance from the equator, and longitude from the first meridian, made commonly at the Canary isles.)

3. The Zones are certain spaces of earth included between two lesser circles. In number five; viz. one torrid Zone, which lies between the tropics: two temperate Zones, between the tropics and polar circles: and two frigid Zones, between the polar circles and the poles.

4. A Clime, or Climate, is a space of earth, between two parallels, in which the longest day is increased by an hour; as for example, in the first Clime, the longest

day is 12 hours and a half; in the second 13 hours; in the third, 13 hours and a half, &c. they are in number 24 that is from the equator to the polar circles.

2. Real Parts.

The real parts are such as have a real existence upon the superficies of the earth, divided into, 1. Water and 2. Land.

1. Water is divided into, 1. Ocean, called a general collection or rendezvous of all waters, giving bounds to the regions of the earth. 2. Sea, a part of the ocean encompassed with land, except one strait, such as the Mediterranean and Baltic. 3. Strait, a part of the ocean, restrained into narrow bounds, opening the way to sea, as those of Magalonica and Gibraltar. 4. Lake, a large space of water, wholly encompassed with land, as Parima and Zaire. 5. Creek or Gulf, a crooked shore, thralling forth as it were two arms to hold the sea, as those of Venice and Lepanto; as for Rivers, Ditches, Brooks, Fountains, &c. they need no description.

2. Land, divided into, 1. Continent, a vast tract of land where many nations are joined together, as Europe, Asia, &c. 2. Island, a space of land wholly encompassed with sea, as Britain, Japan, &c. 3. Peninsula, a space of land encompassed with sea except one small part, as Morea, Malacca, &c. 4. Isthmus is that space of land that joins a peninsula to a continent. 5. Promontory, a mountain shooting itself into the sea, the end of which is called a Cape, as the Cape of Good Hope, Cape Verd, &c. As for Mountains, Rocks, Valleys, Fields, Forests, Woods, Plains, &c. they are all well known.

3. Inhabitants.

The earth is divided in respect of its inhabitants into the right hand and left. 1. To poets the north was named the right hand, and the south the left. 2. To philosophers, the south is the right hand, and the north the left. 3. To Astronomers, the west is the right hand, and the east the left. And, 4 to Geographers, the east

is the right, and the west the left. The inhabitants themselves are distinguished: 1. In respect of their Situation. 2. According to their Shadows. 3. In respect to the position of the globe. And, 4. according to the countries.

1. Those according to their situations are divided into, 1. Anteci, which ly under the same meridian, and same longitude, but on different sides of the equator, 2. Perieci, which live on the same sides of the equator, and the same latitude, but on opposite sides of the globe, 3. Antipodes, that live diametrically opposite to each other,

2. Those according to their shadows, are divided into, 1. Amphiscii, (called also Ascii) who live in the Torrid Zone, whose shadows, tend both ways. 2. Periscii, which live in the Frigid Zones whose shadows tend all ways. 3. Heteroscii, in the Temperate Zones whose shadows tend one way.

3. Those according to the position of the Globe, are distinguished into, 1. Such as live in a Right Sphere (under the Equator) where the stars rise and set at right angles. 2. Such as live in an oblique Sphere, (between the Equator and Poles) where the stars rise and set obliquely. 3. As live in a Parallel Sphere, (under the Poles) where the stars are always parallel to the Horizon.

4. Those according to the countries, are distinguished into a great many nations and people, as French, Spaniards, Italians, Germans, &c. all which shall be more particularly treated of hereafter.

4. National Parts.

The earth in respect to its countries is divided into four parts, viz 1. Europe. 2. Asia. 3. Africa, and 4. America; to which may be added, 5. Terra borealis incognita, and 6. Terra australis incognita. These are divided into Empires, Kingdoms, Regions, Countries, Nations, &c. subdivided into Provinces, Governments, Prefectures, Circles, Territories, Districts, Counties, &c.

As for the Empires, there are six of special note at present, viz. Turkey, Russia, Persia, Tartary, India, and Amballina; to these we may add three others that go by the name, viz. Germany, Morocco, Monomotopa. The description of these, with the kingdoms, inferior provinces, and sovereignties, is the main design of this compendium.

Countries are for the most part divided according to princes dominions (but not always so;) they are separated from each other, 1. Sometimes by sea, as Germany, and Denmark from Swedeland, 2. Sometimes by rivers, as Natolia from Turcumania, 3. Sometimes by mountains, as France from Spain, 4. Sometimes by walls, as China from Tartary, and 5. Sometimes divided only according to the towns and forts of the princes, as France from the Low Countries. Thus much for the world in general.

A Description of EUROPE.

THE continent of Europe is situated between 36 and 72 degrees of north latitude, and between 10 degrees west, and 65 degrees of eastern longitude, being bounded by the frozen ocean on the north; by Asia on the east; by the Mediterranean sea, which separates it from Africa on the south; and by the Atlantic ocean on the west.

This continent with its islands, is divided into three grand divisions, viz. the northern, containing Russia, or Moscovy, Sweden, Denmark, and Norway, Great Britain and its islands, Iceland, Greenland and the islands of the Baltic.

The middle division consists of Poland, Germany, and the adjoining hereditary dominions of the house of Austria, the Low Countries, or Netherlands, France, and its conquests on the Rhine.

The southern division contains Turkey in Europe, the tributary provinces of Moldavia, Walachia, the Crimea and lesser Tartary, Switzerland and their allies,

Italy, Spain, Portugal, and the islands in the Mediterranean.

Russia, or Moscovy, contains a very large part of Europe, but though the north is but little inhabited, as producing few of the necessities of life, yet many of the middle and southern provinces are as fruitful as any in Europe, producing every species of corn and fruits which do not require a very warm climate. The inhabitants were civilized, and from Barbarians, were, in some measure, made a warlike and industrious people, by the conduct and example of Peter the Great. But they have not yet learned to trade much in their own bottoms, their goods being exported in foreign shipping; from which also they receive the produce of the southern countries of Europe. Our Russia merchants export thither coarse woollen cloths, long ell, worsted, stuffs, tin, and tobacco; and from thence import hemp, flax, coarse linnen, linnen yarn, Russia leather, furs, tallow, iron, and pot ashes. The dominions of the Russian Empire extend far into Asia, and even reach to the pacific ocean, being in length from east to west upwards of 3000 miles, and 1500 in breadth from north to south. The government is arbitrary and despotic, and their religion, that of the Greek Church.

Sweden is a cold country, encumbered with barren rocks and mountains, and a great part of the year covered with snow; it has few navigable rivers, but a-bundance of torrents, which running precipitately from their rocks and mountains, after a short course, run into the Baltic sea, which is frozen up four or five months in the year. The country is filled with great lakes and marshes; Lapland and the northern part produce scarce any vegetables, but between the mountains there are fruitful valleys. The riches of this country chiefly consists in their mines of silver, copper and iron. They export from Sweden hard ware, pitch, tar, rosin, masts, deals, and wooden ware; and import thither silks, stuffs, wine, brandy, sugar, spices, tobacco, iron, paper, and haberdashery wares. Their trade to England has been hitherto most advantageous, the English taking the produce and manufactures of the coun-

try, and giving them near two thirds of silver in return : but the encouragement now given for importing iron from New England, must put a stop to a commerce so disadvantageous to us. The inhabitants are protestants of the Lutheran persuasion.

Denmark consists of Jutland, the islands of Zealand and Funen, and the little islands about them. The peninsula of Jutland was antiently called the Cimbric Chersonese, or the peninsula of the Cimbri. The country is generally flat, barren, and sandy; and the air is commonly thick and foggy, occasioned by the seas which almost surround it, and by the numerous lakes in the heart of the country; however, in some parts there is plenty of corn and pasturage. Its chief commodities are fish, furniture for ships, ox hides, tallow, fir, wainscot, &c. The longest day is seventeen hours and an half, and the shortest eight and an half. Their kings have been sometimes, hereditary, and at others elective; and sometimes limited, and at others absolute, as they have been ever since the year 1660. When the peasants, groaning under the oppressions of the nobility and gentry agreed to make the crown absolute and hereditary; they were joined by the clergy, and the king having assembled the nobility and gentry in a garrisoned town, in a manner compelled them to resign their liberties. Their religion is Lutheran, as is that of Norway, which is subject to Denmark, and the church lands being seized by the government at the reformation, the Clergy depend on the state for their subsistence.

Norway is extremely cold and barren, and on that account is but thinly inhabited. The poor people dry their stock fish, and use it instead of bread. Their chief commodities are stock fish, furs, train oil, pitch, masts, tables, and deal boards, which they exchange for corn, wine, fruits, and the other necessaries, and conveniences of life.

As to the islands of Greenland and Iceland, they are cold miserable countries, and but thinly inhabited.

As we are most concerned in the history of Great Britain and Ireland, we shall give a more particular description of them, and place it in an article by itself.

We shall now treat of the middle division of Europe. Poland is a large and level country, being 660 miles in length from north to south, and 560 from east to west. It is a flat level country, well watered by lakes and rivers, the land fruitful, and producing great quantities of wheat and rye; with rich meadows and pastures which feed vast flocks and herds of cattle; it abounds with wax, pitch, salt, soap, rosin, flax, butter, cheese, corn, and rich furs. The government is an elective monarchy, but the king is so restrained by laws, that he has little else besides the shadow of royalty; and while the nobility and gentry are absolutely free, the people are in the most abject slavery, without property, or any thing they can call their own. The nobility and gentry, who are their landlords, or rather masters, are all as despots as kings, and have the liberty of doing what mischief they please; they pay only an inconsiderable fine for taking away the life of a tenant; they seize and destroy at pleasure, so that, under the appearance of freedom, this seems to be the worst constitution on earth. As the whole nation is composed of absolute masters and abject slaves, the latter are only employed in cultivating the earth; all the manufactures necessary for the country are carried on by foreigners, and in general by the Jews who are almost the only people who keep shops, and work at trades. The religion of the country is that of the Romish profession, but Jews and protestants are tolerated. The metropolis of Poland is Warsaw, a large and populous city.

Germany is generally on the north and east, a level country, consisting of barren sands, or marshy grounds; on the south it is encumbered with the mountains of the Alps, but in the middle there is a variety of hills, valleys, fruitful fields and meadows, more particularly along the banks of the Rhine, the Danube, &c. and is adorned with abundance of fine cities, castles, and places. This vast country is divided into ten circles, viz. three on the north, the circles of Upper and Lower Saxony, and that of Westphalia. Three on the south, the circles of Austria, Bavaria, and Swabia. Three about the middle, the circles of Franconia, of the Upper and Lower Rhine. And lastly the circle of Burgundy.

which formerly consisted of the dutchy of Burgundy, and the 17 provinces of the Netherlands; but these last have been long severed from the empire. There are in Germany upwards of three hundred sovereign princes and states, most of them arbitrary within their own territories. The emperor is the fountain of honour, and disposes of almost all these places that are not hereditary, and which have a relation to the government of the whole empire. When an emperor dies, his successor is chosen by the nine electors; but if a king of the Roman Empire has been chosen in the preceeding reign, he succeeds of course. By the golden bull, the person elected ought to be a Christian prince, of German extraction, and 28 years of age. Before he is installed, he signs a capitulation presented him by the electors, princes, and states of the empire; that he will not alienate the lands and revenues of the crown, introduce foreign forces, or employ foreigners in his service. In return, they are all obliged to assist him, and to join their forces in a time of common danger, and to maintain them at their own expence; and, supposing them unanimous, they are able to raise and pay 500,000 men. The people are of various opinions in religion; the principal sects are those of the Papists, Lutherans, and Calvinists; and there are also Independents Baptists, Quakers, the Moravian brethren, &c. but the emperor is always a Papist. Germany produces corn, wine, oil, bacon, beer, rum, flax, a large quantity of fine timber; also black cattle, sheep, and excellent horses. They have mines of iron, copper and silver, of which the silver mines of Hanover are of more value than all the other silver mines in Europe put together. They have also lead, salt, coal, vitriol, quicksilver, nitre, oaker, and sulphur. The people are excellently skilful in the art of war, and are remarkable for their honesty and integrity, in their dealings. Vienna is the metropolis of the German empire, and the seat of the emperor. The hereditary dominions of the house of Austria, are Bohemia, Hungary, Transylvania, Sclavonia, and Croatia. The Netherlands are only about 300 miles long, and 100 broad; these contain seventeen provinces, of which 15 are possessed by the Dutch, and are called the United

nited provinces, and the others are called the Austrian and French Netherlands. The names of the united provinces are Holland, Zealand, Friezland, Groningen, Overijssel, Gelderland, Zutphen and Utrecht. The other ten provinces are Brabant, Flanders, Hainalt, Limbourg, Luxemburg, Namur, Artois, the Cambrésis the Marquisate of Antwerp, the Lordship of Malines, or Mechlin. Of these the French possess the entire provinces of Artois and Cambray, part of Flanders, Hainalt, and Luxemburg; the Dutch the north of Brabant and Flanders, and all the rest are subject to the house of Austria.

France is one of the most flourishing kingdoms in Europe, but is not so populous as Germany. The soil is exceedingly fertile, producing corn, wine, oil, silk and flax in great abundance, and is extremely well situated for foreign trade, as it lies on the Atlantic ocean, the English channel, and the Mediterranean sea, and is watered by many large and navigable rivers. Their manufactures are of linnen, woollen, silk and lace, with which they trade to Spain, Italy, Turkey, and to the east and west Indies. The air is temperate, agreeable and healthy; the manners of the people are polite, and they are the most active and enterprising of any nation in Europe. They are under an absolute government, and profess the Romish religion, though they pay less regard to the pope than any other of his children: but, nevertheless, the protestants, which are here very numerous, are seldom free from persecution.

Of the southern division of Europe, Turkey is the most easterly, and therefore to preserve the order which we proceeded with the others we shall begin with that first.

Turkey in Europe is a very extensive empire, comprehending some of the richest countries in this part of the world, extending upwards of 1000 miles from east to west, and 400 in breadth from north to south, the numerous islands in the Archipelago, or Egean Sea, but part of them are in Asia, where, as well as in Europe, their dominions are very considerable. In Europe the Turks are possessed of Romania, Bulgaria, Servia, Bosnia, Ragusa, Wallachia, Moldavia, Bessarabia, Georgia, and Oczakow, Tartary, Crim and Little Ta-

with Albania, Epirus, Macedonia, Thessaly, and all the
 ancient Greece. Situated as they are, in the centre of
 the continent, they might command the trade of the
 whole world: but this advantage they have lost by their
 indolence and inactivity, and the destructive maxims of
 their government. The goods imported from Turkey
 are raw silks, carpets, goats hair, mohair, yarn, goats
 wool, cotton wool, and yarn, dimities, burdets, skins,
 mordants, blue, red, and yellow; coffee rhubarb,
 serpentine, opium, gum senega, terralemonia, cluna root,
 and abundance of other drugs; wine, oil, figs, raisins,
 dates, almonds, pistachio nuts, allom, vitriol, boxwood,
 bees wax, saffron, &c. Constantinople is the seat of the
 grand seignior, who is an absolute prince. Italy, has a pure, temperate and healthful air, and the
 soil is in general exceeding rich, but the people are so
 clogged with slavery, and harrassed with the tyrannies,
 oppressions, and impositions of their priests, that it is far
 from being sufficiently cultivated. It is in length from
 north west to south east, 600 miles, and upwards, but
 the breadth very unequal, as it is said to resemble a boot;
 it is described, as having the top 400 miles broad from
 east to west; in the calf of the leg, or middle, it is about
 200, and towards the instep 80 miles broad. In the
 north are the dutchies of Savoy, Piedmont, and Mont-
 errat, subject to the king of Sardinia; the territory of
 Genoa, subject to the Genoese; the dutchies of Milan,
 Mantua, and the rest of Montferrat, subject to the house
 of Austria; the dukedom of Modena, subject to its own
 duke; and the large territories of Venice, subject to that
 republic. In the middle of Italy is the dukedom of Tus-
 cany, subject to the duke of Lorrain; the popes domi-
 nions, which almost surround Tuscany; and the state of
 Sicily. In the southern division is the kingdom of Na-
 ples, subject to the king of the two Sicilies. The peo-
 ple have a taste for the polite arts, and excel in archi-
 tecture, statuary, music and painting. Our trade to I-
 taly is carried on by separate merchants, who export
 broad cloths, long-cells, bays, druggetts, calimancoes,
 tablets, and other stuffs; leather, tin, lead, fish, pep-
 per, and east India goods; for which they in return im-

port raw and wrought silk, velvets, wine, oil, soap, olives, anchovies, and drugs for dying.

Switzerland is situated in the valleys between the Alps, the highest mountains in Europe, which, though lying between 45 and 48 degrees of north latitude; and for a great part of the year covered with snow, and the air is here much sharper than in countries that lye more to the north. From these mountains the largest rivers in Europe have their source. particularly the Rhine, the Rhone, the Danube, the Rufs, and the Inn. Here are also extensive lakes, those of Constance and Geneva are each sixty miles long. The soil produces some corn and wine, but as the fruits of the earth are frequently destroyed by storms, or cold rains, they, to prevent the poor from perishing, in plentiful years, lay up their corn in magazines. They breed and supply the neighbouring countries with abundance of cattle. They have some crape and linen manufactures; but as almost all their cloathing is imported from abroad, they wisely rectify this inconvenience, by retrenching all superfluities. Switzerland is divided into three classes. Switzerland Proper, or the thirteen cantons, the subjects of Switzerland, or the conquered countries, and the allies of Switzerland, as the Grisons, the republic of Geneva &c. Of the thirteen cantons some are protestant, and other popish cantons, but they all unite against a common enemy.

Spain enjoys a fine air, and generally serene settled weather, except in spring and autumn; the winter is moderate in the valleys, that for nine months in the year they have very little occasion for fires; but in June, July and August, the heats are very troublesome. The soil produces excellent wheat and barley; they have rich pastures, and their wool is the best in Europe. they abound in wine, oil, and silk, and in oranges, lemons, raisins, citrons, prunes, figs, capers, chestnuts, almonds, and pomegranates; they have valuable mines of copper, lead, allom, and sulphur, and the iron and steel of Biscay is reckoned the best in Europe. But, notwithstanding so fine a country, and the vast treasure they have drained from their American mines, Spain is poor, and but thinly peopled; but their poverty ma

in a great measure, ascribed to their pride and intolerance. Their land is cultivated by foreigners, and they export great part of the produce of their country wrought. Those of our merchants, who trade to Spain, export broad cloths, druggets, bays, long ells, calimancoes, and other stuffs, tin, lead, leather, fish, horn, hose, and haberdashery wares, and from thence import wine, oil, salt, and fruit. It is computed that from this trade England receives a greater balance than from that of any other nation, except the Portugeze. Portugal is the most westerly kingdom in Europe, being about 300 miles long, and 100 broad; it is neither so hot nor so fruitful as Spain, and is encumbered with some of the most barren and unprofitable mountains; which, however, towards the bottom, being planted with vines, produce most excellent wine; and though the soil produces plenty of olives, as well as oranges and lemons, yet they have not corn enough for their subsistence. The foreign trade of the Portugeze consists either in the exportation of the produce of their own soil, or in the merchandize they receive from their settlements in Asia, Africa, and America. There is no country to which the English trade to greater advantage; though we import the greatest part of their wine and fruit, they take our woollen manufactures in return. The inhabitants of Spain and Portugal are the most bigotted Papists in Europe.



A Description of ASIA.

ASIA is situated between 25 and 148 degrees of eastern longitude, and between the equator, and 72 degrees of north latitude, being bounded by the frozen ocean on the north, by the Archipelago, the Euxine sea, which separates it from Europe on the north west; by the Red sea, which separates it from Africa on the south west; by the Indian ocean on the south; and by the Pacific ocean on the east.

This quarter of the world is thrown into three grand divisions, the first containing the empire of China, Chinesian Tartary, and the oriental islands on the east. The second, India, Usbec Tartary, Calmuc Tartary, and Siberia in the middle. And the third containing Persia, Arabia, Astracan, Circassian Tartary, and Turkey in Asia on the west.

China, including Chinesian Tartary, is divided from Siberia by the river Argun, and is 2000 miles in length from north to south, and 1000 in breadth from east to west. This vast empire is usually divided into 16 provinces, in which are computed 155 capital cities, 131 of the second rank, and 2357 fortified towns. On the limits of China, there is a stone wall 1500 miles long built to defend them against the incursions of the Tartars; but, notwithstanding this, about an hundred years ago they made a conquest of China. This is thought to be the most populous empire in the world. In the north and very far to the south, the air is very cold, occasioned by the height of the land. The chief produce of the country is silk, tea, china ware, gold dust, and japan work, of which England, Holland, Portugal, and France, import a great deal, sending them silver in return. Their religion is pagan, of which several sects are tolerated. Europeans complain of them as a very deceitful people.

Of all the eastern islands, those of Japan are the most famous; that called Japan, and which gives its name to all the rest, is about 600 miles long, and from 100 to 150 broad, besides which, there are several others of considerable bigness, all subject to the emperor of Japan, who has fifty or sixty vassal princes under his dominions. The revenues of this emperor are said to be greater than those of any monarch upon earth. The trade with the Chinese, but no European nation are allowed this privilege except the Dutch, who carry Japan spices, sugar, silks, woollen and linnen cloth; elephants teeth, and haberdashery wares, and they receive in return gold, silver, fine copper, cabinets, and other Japan and lacquered wares.

The peninsula of India, or India Proper, is the most southern part of the second division of Asia, and is about

2000 miles from south to north, and in the broadest part 1000 from east to west. The northern part of this vast country, has a temperate healthful climate, but in the south it is extremely hot, especially when the winds blow in April and May. They have periodical rains, which, beginning in June last till October, which is the season for planting and sowing; but they have scarce any grain besides rice, except in the north. The produce of the continent of India, and what the Europeans export from thence, are chints, calicoes, muslins, pepper, and diamonds, which most nations purchase with silver, but the Dutch frequently barter spices for them. Their religion is paganism, and they all believe in the doctrine of transmigration. They are under the government of the great Mogul, an arbitrary and despotic prince, who is the sole landlord and proprietor as well as sovereign. India beyond the Ganges extends near 2000 miles from north to south, but is of a very unequal breadth, it comprehends the kingdoms of Asem, Ava, Pegu, Laos, Siam, Cambodia, and Malacca; the last is in the possession of the Dutch, and the rest is governed by as many Indian princes. Great part of this country would be intolerably hot, were it not for the periodical rains, which, when the sun is vertical, overflow the country, and the breezes which come from the sea. The natives are of an olive colour, and their religion various sects of paganism. There is no country where there are such numbers of elephants. Our merchants here meet with gold and precious stones, canes, opium, and such other articles as are usually found between the tropics, but they have no corn except rice.

Tartary, which is the same as the ancient Scythia, comprehended all the north of Europe and Asia, of which the Russians possess the principal part, and have given it the name of Siberia; and this part of their dominions extend even to the pacific ocean, and is 2000 miles in length, and 1300 in breadth. The Tartars of Astracan, and the Calmuc Tartars, are also subject to Moscow, those of Circassia and Dagistan, sometimes put themselves under the protection of the Turks, and sometimes of the Russians. The Usbec Tartars are tributary to the sovereign of Persia. Nor-

them Tartary is a barren country; almost always covered with snow, in which are few houses or inhabitants. But in the south the Tartars enjoy a temperate climate, and a fruitful soil; yet they do not apply themselves to cultivate the land, but are continually moving from place to place to find pasture for their numerous flocks and herds.

Persia is the first country we shall mention in the third division of Asia. It is 1200 miles long, and almost as many broad. In the south, which lyes near the tropic of Cancer, the air is so excessive hot, that for two or three months in the year it is dangerous to stir out a noon; for at that time the winds blowing over a vast tract of burning sands, are heated to such a degree as frequently to prove mortal. There is very little water, but what they have is managed with the greatest care and conveyed through innumerable aqueducts to their towns, their fields and gardens. It is a country incumbered with barren mountains, but whose valleys are fruitful. They have a prodigious variety of the richest fruits, but scarce any corn except rice. The soil also produces abundance of medicinal drugs; and they have a fine breed of horses, but as the country is very sandy and filled with large deserts, there camels and dromedaries are their most useful animals. One of the principal manufactures of Persia, is embroidery in gold and silver on cloth, silk, or leather. Turkey-leather is chiefly brought from hence and carried thro' Turkey; as also those called Turkey carpets are really made here. But the principal manufacture of the country is that of silk, which they either work up alone or mix with cotton, camel or goats hair; their brocades, gold tissue, and gold velvet are admirably fine. They also manufacture camel hair stuffs, camblets, silk and worsted druggets. Their greatest men are merchants, but the Armenian and Indian banyans, who reside there, carry on the most distant foreign traffic. They take broad cloth from England, in exchange for their raw silk, and an act has lately passed here for carrying on the same trade through Russia. Our East India company have long traded thither by the way of Gombroon and the Persian gulph. The people are civil to strangers, but, live in a luxurious

their religion is that of the mahometan; and the sophy of Persia is an absolute prince. Arabia joins on the east to Persia, and is a country of extensive government by several princes, and divided into many states. The people generally live in tents, and move from place to place to find pasture and water for their cattle; great part of their country being a dry and barren desert. Turkey in Asia, contains Chaldaea, now called Elymaea, Arabia, Mesopotamia, now Diarbeck; part of Asia, now called Kurdistan, Armenia, now Turcomania, part of Georgia, Mingrelia, and Circassia; part of Arabia, Syria, Palestine, Nubia, or Asia Minor. Some of which are as fine and fruitful countries as any in the world.

A Description of AFRICA.

AFRICA is joined to Asia by the narrow isthmus of Suez, and situated between 37 degrees north, and 37 degrees south latitude, and between 18 west, and 15 degrees of east longitude, bounded by the Mediterranean, which separates it from Europe on the north, by the isthmus of Suez, the Red Sea, and the eastern ocean, which divides it from Asia on the east; by the southern ocean on the south; and by the Atlantic ocean, which separates it from America on the west.

Africa is divided into ten divisions, Egypt, Abyssinia, the Upper Ethiopia; the coast of Anian and Zanguebar; Monomotapa, Monomotopa, and Cassaria, or the Lower Ethiopia; Congo, Angola, and Guiney; Nigritia, or Negroland; Zaara; Biledulgerid; the antient Libyia; the empire of Morocco; and the coast of Barbary.

Egypt is situated near the extremity of the Mediterranean, and is 600 miles in length from north to south, and from 100 to 200 in breadth from east to west. The climate here very hot and the soil extremely fertile occasioned by the overflowing of the Nile, without which, it

would be a barren waste, as it very seldom rains in the country. The lower Egypt is a triangular island, made by the Levant, and the two principal branches of the Nile. No place in the world is better furnished with corn, flesh, fish, fruits, and the most excellent garden stuff, but the people are very subject to have sore eyes. The Egyptians were the inventors of almost all arts, and there are still to be seen their antient pyramids, one of which is 700 feet high. Egypt is subject to the grand seignior, but his authority is extremely limited by the Egyptian princes. Ethiopia superior, comprehending Abyssinia, Nubia and Abex, joins to Egypt on the south. The river Nile rises from a lake almost in the middle of Abyssinia, which being swelled by the periodical rains, that fall annually between the tropics, overflow Egypt and all the low grounds which border on that river. The country produces plenty of corn, rice, wine, sugar, flax, and the fruits proper to the climate; but the Turks being in possession of Abex, have shut up all the avenues to the country. Camels, horses, oxen, sheep and asses are their cattle. The Abyssines are perfectly black, but have neither flat noses nor thick lips. It was the king of this country who was called Prester John. They keep both the Christian and Jewish sabbath, and both baptize and circumcise their children, and even their female children.

The coast of Anian is a barren country, on the east of Abyssinia, subject to several African princes.

Zanguebar, is another country on the east of Asia, lying on the south of Anian and contains the provinces Majadoxa, Melinda, Quiloa, Mozambique and Sofala. The Portuguese have here made several settlements and trade with the natives for gold, slaves, ivory, ostrich feathers, wax and drugs.

Cassraria, or the country of the Hottentots, lies in the southernmost part of Africa, and almost surrounds the inland country of Monomotopa, a part very little known. The Hottentots are a savage and nasty people. In the country the Dutch have built a town and castle near the most southern promontory, called the Cape of Good-Hope.

Congo and Angola lyes on the west of Caffraria. Thither the European merchants resort to purchase slaves. These countries are subject to several Negro princes; but as the Portuguese have a great many settlements on this coast, and in the inland country, they pretend to the dominion of the whole, and that these princes are their vassals; however the trade is open to all the nations that please to traffick with the natives. The chief town on this part of the continent is St. Salvador; but the capital of all the Portuguese settlements in this part of Africa, is the city of Loango, in a small island near the coast. The slaves of Angola, as they are not bred to labour, are generally agreed to be the laziest and most intractable of any of the slaves purchased on the coast. The Guiney coast has the Atlantic ocean on the south and west, and is divided into the grain coast, from its chiefly producing Guiney grain; the ivory coast, from the plenty of elephants teeth found there; the gold coast, from its furnishing much gold; and the slaves coast, from its furnishing the greatest number of slaves. The English, Dutch, and French, have forts and factories on this coast; for the Portuguese, after having possessed the whole for upwards of 100 years, were drove from hence by the Dutch. The princes of the inland country being almost always at war, sell their prisoners to the Europeans for slaves.

Negroland is a fruitful country, producing rice, Guiney grain, and Indian corn; also coëoa nuts, plantains, pulse, palm trees, and tropical fruits. The Europeans trade thither for slaves, gold, ivory, bees-wax, gum-senega, and other drugs.

Zaara is a barren desert country that produces scarcely any thing to sustain life; it has no towns, but the few inhabitants who know where to find springs of water, live in tents, and wander from one country to another, to find grass and water for their cattle. These people are of an olive complexion, their language is Arabic, and their religion mahometanism.

Blieudulgerid lyes on the north of Zarra; it is partly subject to the Turks, and partly to the king of Morocco. The climate is very hot, but generally esteemed wholesome. The soil is but indifferent, and the

commodities are chiefly cattle, corn, dates, and indigo. The religion of the inhabitants is that of mahomedanism.

Morocco has the Mediterranean sea on the north, and the Atlantic ocean on the west, and is about 500 miles long, and 200 broad. It is a fine country, consisting of mountains and fruitful plains. The soil produces corn and the richest fruits. They send several thousand camels, horses, and mules, every year to Mecca and Negroland: to Mecca they carry fine woollen goods, Morocco skins, indigo, cochineal, and other rich feathers, bringing back silks, muslins, calicoes, coffee, and drugs. By the caravans to Negroland they send salt, silk, and woollen goods; taking gold, ivory, and negro slaves in return. The emperor is an absolute despotic tyrant, but he has no ships of war except small pyrate vessels.

Barbary, comprehending Algiers, Tunis, Tripoli, and Barca, lyds on the east of Morocco, and extends along the southern shore of the Mediterranean, as far as Egypt. The air of the country is temperate and healthy, the soil fruitful; its chief commodities are honey, wax, oil, flax, dates, almonds, hides, &c. The religion of this country, as well as Morocco, is mahomedanism.



A Description of America.

America is situated between 80 degrees north, and 8 degrees south latitude, and between 35 and 145 degrees of west longitude. It is bounded on the west and south by the ocean; but on the north some have imagined it joined to the other continent; while others, finding a great current flowing in Hudson's bay from the east, suppose that it is divided from the north by a large river, which has a communication with the ocean, on the other side of the continent. Others have imagined, that the north east of Siberia joins to the west of the unknown continent of America, well

son's bay; and that thus instead of two continents, we have but one. If this supposition be true, it will account for the peopling of a country so far distant from that place of the world in which man was originally placed.

The principal part of America is at present under the dominion of Spain, Portugal, Great Britain, and France.

The Spanish dominions, which are by far the largest, comprehend Old and New Mexico, Florida, Terra Firma, Peru, Chili, Patagonia, Paragua, and la Plata, the country of the Amazons, and the Spanish islands, of which the most considerable are Cuba, Hispaniola, Porto Rico, and Trinidad.

The second division is subject to Portugal, and comprehends the country of Brasil, extending from the river Amazon, under the equator, to the river La Plata, in 34 degrees south latitude, an extent of 3000 miles, but only 200 miles broad.

The third grand division is subject to Great Britain, and lies along the eastern coast of North America from 41 to 51 degrees of north latitude, and lying in the following order from north to south. The Isle of Newfoundland, New Britain, Nova Scotia, or New Scotland, New England, New York, the two Jerseys, Pensilvania, Maryland, Virginia, North Carolina, South Carolina, Georgia, and the Islands of Jamaica, St Christo-
phers, Barbadoes, &c.

The fourth division is claimed by the French, which, according to their maps, extends from the gulph of Mexico to the north of Canada, that is, from 28 to 52 degrees of north latitude, being 1500 miles from north to south, and very little less from east to west: these being the British dominions on the east, and New Mexico on the west, comprehending the greatest part of Canada and Florida, to which countries they have given the names of New France and Louisiana. The islands subject to France are those of Caen, and part of the island of Hispaniola, Martinico, Guadalupe, and several of the other Caribbee islands,

The Dutch are possessed of Surinam on the coast of Guayana, or Caribiana in South America, and others on

the north coast of Terra Firma, of which those of Caraffow, Arabia, and Bonnaire are the chief, and from hence they carry on a clandestine trade with the coast of Spanish America.

Denmark is possessed of the island of St Thomas one of the Caribbees.

It would take up too much room to give a particular account of all the countries of this vast continent. We shall therefore conclude our account of this part of the earth with some general observations.

America, as a continent, is divided into two parts north and south, by the isthmus of Darien. This isthmus is a neck of land, of about sixty miles broad, and 300 in length, and filled with high mountains, on which the snow frequently lies, though it is only between and 10 degrees of north latitude; the wind, which great part of the year blows from thence into the south sea, is cool and refreshing; while on the other side the air of the Atlantic ocean is excessive hot. America enjoys all the advantages of the other three parts of the globe, being extremely fruitful, and having a fine soil except towards the north, where it is much colder than any part of Europe that lies under the same latitude. The air is filled with an infinite number of birds, the rivers with fish, and (where uncultivated) the land with trees; so that the principal difficulty in making new settlements consists in clearing the ground. The British and French settlements chiefly produce tobacco, sugar, pepper, corn, rice, timber, iron; and from hence are imported skins, furs, fish, and some drugs. The Spanish settlements, produce cochineal, and other drugs, with great quantities of gold and silver; but it is said that the gold mines of Mexico is almost exhausted. The Portuguese settlements at Brazil in South America at present produce vast quantities of gold, diamonds. And the Dutch settlements at Surinam furnish them with tobacco and sugar.



BRITISH ISLANDS.

THE British islands, or the English dominions, ly in the western ocean, on the north of France and east of Denmark, Germany and the Low Countries. Situated between the 8th and 20th, and 35 min. of lon. and between the 50 and 59 deg. of lat. Under this name are comprehended four distinct parts, besides the *Far Isles*. viz. 1. England, 2. Wales, 3. Scotland, 4. Ireland.

I. ENGLAND.

The kingdom of England lyes on the south of Scotland, and north of France, from which it is divided by the Channel, of a triangular form, encompassed on three sides with sea. In length from north to south, about 200 miles, and in breadth from east to west about 300, containing about 27 millions of acres.

The inhabitants are mostly of the reformed religion, though here in its purity (the divisions I forbear to mention) some few are Papists; their language is a branch of the Teutonic, chiefly composed of old Saxon, Latin and French. Their chief commodities are corn, cattle, copper lead, iron, timber coals, abundance of wool, stuffs, linen, hides, tallow, butter, cheese, beer. It is divided into six circuits, viz.

1. Northern circuit, 2. Midland circuit, 3. Oxford circuit, 4. Norfolk circuit, 5. Home circuit, 6. West circuit.

Rivers of principal note are four, viz. 1. Thames, 2. Severn, 3. Trent, and 4. Tweed.

Mountains of the greatest account are three, viz. Ingleborough, 2. Pendle, and 3. Pennegent.

Bishopricks 2. Bishopricks 20. Universities 2.

An account of the several counties of England and Wales, with their produce, market-towns, and market-days.

Note, *m* stands for Monday, *tu* for Tuesday, *w* for Wednesday, *th* for Thursday, *f* for Friday, and *s* for Saturday.

Bedfordshire.

AN inland county, in Lincoln diocese, 73 miles circumference, is a fruitful country, well stored with corn and cattle, especially in the northern part. It produces barley and wheat as good, if not the best in England.

Market-towns.

Bedford, the shire town, Tuesday and Saturday.

Dunstable w

Shefford f

Woburn f

Biggleswade tu

Amphill th

Potterton f

Leighton tu

Tuddington f

Luton m

Berkshire.

An inland county in the diocese of Salisbury, and pleasant country, 120 miles round, where the air is good and the soil fruitful. It yields plenty of corn, cattle, wild fowl, wool, and wood, especially oak.

Market-towns.

Reading, the shire-town, Saturday.

Abingdon m and f

Newbury th

Windsof f

Faringdon tu

Wallingford tu and f

Wantage f

Maidenhead w

East-Isley w

Hungerford w

Oakingham tu

Buckinghamshire, or Bucks.

Another inland county in Lincoln diocese, 138 miles in circuit, is very plentiful both in corn and pasture, particularly the famous Vale of Aylesbury, which feeds an infinite number of sheep, yielding excellent wool. The Lame, Ouse, and Coln are its principal rivers.

Market-towns.

Buckingham the chief, Saturday.

Aylesbury f

High Wickham f

Colebrook w

Stoney Stratford f

Oulney m

Marlow f

Wendover th

Beaconsfield th

Chesham w

Risborough f

Amersham w

Newport Pagnel f

Tring f

Winflow th

Cambridgeshire.

An inland county, in the diocese of Ely, 120 miles in circumference, abounds in corn and pasture; fish, wild-fowl and saffron. 'Tis true, the north part of it called the Isle of Ely is full of marshes, and subject to small inundations, which makes it unhealthful, and yield but little corn; but this defect is richly supplied with plenty of cattle, fish, and wild fowl. Cambridge is remarkable for a famous university, containing 12 colleges and 4 halls, and are as followeth.

Peter House,

Corpus Christi, or

Bennet col.

St. Andrew and Cairns

King's college

Queen's college

Jesus college

Founded in

1284. by Hugh de Baltham,
Bishop of Ely.

1346. by Henry of Monmouth,
duke of Lancaster.

1348. and so named from its
founders.

1441. by King Henry VI.

1448. by Margaret, wife to
Henry VI.

1497. by L. L. D. Bp. of Ely.

Christ's college
St John's college
Magdalene col.
Trinity college
Emanuel college
Sidney Sussex col.

Founded in

1506. by Margaret countess of
Richmond, mother of H. VII
1506. by the same.
1542. by E. Stafford, the last D
of Buckingham of that name
1546. by King Henry VIII.
1584. by Sir Walter Mildman
chancellor of the exchequer
1598. by Frances Sidney, coun
tess of Sussex.

HALLS.

Clare hall
Pembroke hall
Trinity hall
Katherine hall

Founded in

1343. by Richard Badew.
1347. by Mary de St Paul, coun
tess of Pembroke.
1353. by William Bateman, bp
of Norwich.
1439. by Robert Wood, chan
cellor of the university.

Market-towns.

Cambridge, the chief, Saturday,

Ely f
Caxton tu
Newmarket tu
Linton th

Merche f
Royston w
Wisbich f
Soham f

Cheshire, or County of Chester.

A maritime county in the diocese of Chester, 11
miles round. It yields more pasture than corn, and
for the most part level: its greatest hills being those th
part it from Stafford and Derbyshire. There are in
several forests, particularly Delamere and Macclesfie
forests: and so great a number of parks, that few ge
tlemens country seats are without one.

There are also many heaths, in which both sheep and
horses feed; and some mossy plots, which make goo
turff to burn.

Its principal rivers are the Dee, which waters the
W. parts, the Weaver running through the middle, and
the Mersey northward.

Cheese and salt are the chief product of this county, and both in great request all over England.

Market-towns.

Chester, the capital, Wednesday and Saturday.

Namptwich f

Middlewich f

Norwich f

Macclesfield m

Congleton f

Fordeſham w

Stockport f

Sandwich th

Altringham tu

Malpas m

Knotsford f

Cornwall.

A maritime county in the diocese of Exeter, is the most western county of England, surrounded with the sea on the north, south, and west, and parted from Devonshire, eastward by the Tamer, all but a slip of land; so that 'tis a perfect peninsula, 150 miles in circumference: but is none of the most fruitful parts of England. It is true, its valleys are full of corn and pasture, and the hills famous for their tin and copper mines; and it abounds in wild fowl, and the seas thereof in fish. It yields also plenty of sapphire, crinoid, fine slate and marble.

Market-towns.

Launceſton, the chief, Saturday.

Lestkard f

Lestwithiel f

Catchelford f

Westlow, or

Port Pigham f

Grampound f

Fallow f

Penryn w, f and f

Truro w and f

Bodmin f

Foway f

Kellington w

St German f

Newport f

Tregony f

St Ives w and f

Helston f

Saltash tu

St Columb th

Marker-Jew th

Padstow f

Penzance th

Falmouth th

Stratton tu

GEOGRAPHY.

Cumberland.

A maritime county in the north of England, and in the diocese of Chester and Carlisle, is bounded northward with Scotland, and westward with the Irish sea, and is 168 miles round. It yields plenty of corn, pasture, wild fowl, fish, coal-pits, and mines of copper and lead.

Market-towns.

Carlisle, the chief, Saturday.

Cockermouth to

Whitchaven th

Keswick C

Penrith to

Brampton, IN

Holm f

Esmermont

Affen-Moor f:

treby th

Kirk Oswald th

Longtown th

Ravenclaw's

WILSON

Derbyshire

An inland county northward in the diocese of Litchfield and Coventry; 120 miles in circuit, is a plentiful county of pasture, corn and wood. Here are also quarries of free stone, marble, mill, lime, whet stones, coal, lead and iron mines, chrystal and alabaſter.

The river Darwent, which glides through this country from north to south, and falls into the Trent, divides it into two parts, east and west.

Market-towns.

Derby, the shire-town, Friday

Chatterfield

Worksworth to

Bolover f

Alfred to

Ashbourn f

Blackwell m

Dronsfeld th

Tiddleswall w

Devonshire.

A maritime county in the diocese of Exeter, 20 miles in circumference. It lies in the west of England.

borders upon Cornwall, and is watered on two sides with the sea, viz. north and south. The air is very good, and the soil for the most part fruitful; but there are both hills and woods. This county abounds chiefly in corn, pasture, wool, wild fowl and sea fish. There are also tin and lead mines. Its chief manufactures are kerseys, serges and lace.

Market-towns.

Exeter, the chief, Wednesday and Saturday.

Barnstaple f	Topsham f	Dodbrood w
Dartmouth f	Axminster f	Hartland f
Honiton f	Autrey tu	Hatherly tu
Oakhampton f	Bampton f	Holdsworthy f
Plimpton f	Bow f	Kingsbridge f
Tavistock f	Chimleigh th	Kirtton th
Tiverton tu	Cudleigh f	Modbury th
Plymouth m & th	Columpton f	Moreton f
Totnefs f	Combmartin f	Newton th
Ashburton f	Gulliton th	
Bideford tu	Torrington f	

Dorsetshire.

A maritime county upon the Channel, lies east of Devonshire, in the diocese of Bristol, 150 miles in compass. It is a pleasant and fruitful county, yielding plenty of corn, cattle, pasture, wild fowl and fish; also abundance of hemp, and quarries of free stone and marble.

Market-towns.

Dorchester, the capital, Saturday.

Weymouth tu & f	Wareham f	Cerne w
Malcomb Regis	Corfe-Castle th	Frampton th
tu & f	Cranborn w	Sherborn tu and f
Bridport f	Blandford f	Milton m
Bere w	Sturminster th	Winbourn f
Pool m and th	Abbotsbury th	Stalbridge f
Shaftesbury f		

Durham.

A maritime northern county, commonly named the Bishoprick of Durham, 107 miles in circuit. The air is sharp, and the soil not very fruitful. The east side is the best, the south full of marshes, and the west full of rocks. The greatest advantage of this county consists in coal, iron and lead mines.

Market-towns.

Durham, the capital, Saturday.

Aukland th

Hartlepool m

Stockton f

Stamthorp tu

Sunderland f

Barnard Castle w

Darlington m

Essex.

A maritime county in the east part of England, and the diocese of London, called Essex from the East Saxons, by whom it was inhabited. It is about 146 miles in compass. Here the air is temperate, but near the sea and Thames very moist and agreeable. The soil yields plenty of corn, cattle, and wool. Here is also abundance of fish and wild fowl. In the north parts saffron grows to admiration. And there are some parts, the soil of which is so rank, that after three crops of saffron, it yields good barley for near 20 years together, without compost.

This county is watered by a great number of rivers, besides the Thames that parts it from Kent, the Stour from Suffolk, the Lea from Middlesex, and the little Stour from Hartfordshire; here's the Coln, Chelmer, Crouch, Roding, and many other Rivers, all yielding plenty and variety of fish.

Market-towns.

Colchester, the county town, Saturday

Harwich tu

Hatfield f

Rumford w

Barking f

Widham tu

Ingershoe w

Maldon f

Chelmsford f

Walden f

Billericay tu	Burntwood th	Dunmore f
Cogeshall f	Graves th	Halfhead f
Horndon f	Raleigh f	Waltham Abbey tu
Manningtree tu	Thaxtead f	Sudbury f
Epping th and f	Braintree w	

Gloucestershire.

An inland county in the diocese of Gloucester, 138 miles round, is a fine, fruitful and delightful country. The hills on the east side, called Cotswold, are covered with flocks of sheep, whose wool is called the finest in Britain. The middle parts are level, and watered by the Severn, which contributes much to the fertility. Westward is the ancient forest of Dean, formerly 20 miles long; but now much less; the iron mines having consumed a great part of it.

Besides the Severn, which crosses this county from north to south, here is the Avon that parts it from Somersetshire, the Wye that partly divides it from Monmouthshire, besides the Stroud and the Isis, all very fishy rivers; the Severn yielding great plenty of salmon.

Formerly the vales of this county were full of vineyards, which have been since turned into orchards, yielding plenty of apples for cyder.

In short, this county abounds in corn, wool, wood, iron, cyder and salmon. Among its manufactures, the woollen is most considerable. Here is also made great quantity of good cheese.

Market-towns.

Gloucester, the shire town, Wed. and Sat.

Gloucester m	Fairford th	Northleech w
and f	Tewksbury f	Blackley w
Burley th	Camden w	Newnham f
Stroud f	Chettenham f	Letchlade tu
Stewert f	Sudbury th	Panswick tu
Stow th	Tedbury w	Wickware m
Thornbury f	Winchcomb f	Wotton f
Marshfield tu	Morton f	Dean m

Hampshire, Hants, or Southampton.

This is a maritime county, on St. George's Channel, between Suffex East and Dorset West, in the diocese of Winchester, 100 miles in circuit. It is a pleasant and fruitful county, yielding plenty of grass, corn, wool, wood and iron; and particularly noted for the excellency of its honey and bacon.

On the west side it is watered by the Avon and Stour, which meet near the sea; and on the east by the Test and the Itchin, that joins near Southampton.

Market-towns.

Southampton, the shire-town, Tu. and Fr.

Winchester w. and f.

Portsmouth th and f.

Andover f.

Limington f.

Petersfield f.

Stockbridge th.

Whitechurch f.

Newport w. and f.

Alton f.

Farnham th.

Basingstock w.

Kingsclear tu.

Ringwood w.

Odiham f.

Rumsey f.

Waltham tu.

Aliston th.

Hartfordshire.

An inland county, in the diocese of London and Lincoln, 130 miles round, is a fine delightful place; and has more gentlemen's parks than any other county. Here the inhabitants breathe a wholesome air, and the soil yields plenty of corn, grass and wood. The Lea and Coln are its principal rivers; wheat, barley, and malt its chief commodities, and, with Bedfordshire, the best in Great Britain. The plowmen and farmers are outdone by none.

Market-towns.

Hartford is the county-town, Saturday.

St. Albans f	Baldock th
Barnet m	Hitchin tu
Ware tu	Hodson th
Barkhamstead m	Stevenage f
Rickmansworth f	Thring f
Hatfield th	Watford tu
Buntingford m	Hempstead th
Standon f	

Herefordshire.

An inland county in Hereford diocese, toward Wales, circuit 120 miles, abounds in all things necessary for use, particularly corn, wool, salmon and cyder. Its soil and cyder are counted the best in Great Britain; and yet their cyder is made of the red-streak apple, scarce eatable, but growing no where so well as in this county.

Market-towns.

Hereford is the capital, Wed. Frid. Sat.

Lempster f	Pembridge tu
Wobly th	Ledbury tu
Kyniton w	Bromyard m
Ross th	

Huntingdonshire.

An inland county in the diocese of Lincoln, by some named Willowshire, for its plenty of willow, is 67 miles round, was formerly a very woody county, and consequently most proper for hunting, whence the name Huntingdonshire. Now it is open and marshy on the E. but plentiful of pasture. In general it is a pleasant county, diversified with hills, and yielding plenty of corn and cattle. Its principal river is the Ouse; now navigable, whose beautiful meadows, with such multitudes of cattle upon them, are well worth seeing.

Market-towns.

Huntingdon, the chief, Saturday.

St Ives m

Kimbleton f

St. Neots th

Ramsey w

Yaxley tu

Kent.

A maritime county, at the east part of the channel in the diocese of Canterbury and Rochester, is 160 miles in compass. According to the different parts of its soil 'tis divided into three parts, viz. the Downs, which has health without wealth; the Marshy Parts, that has wealth without health; and the Middle that has both health and wealth. One part of this county is wood, another corn, and the third pasture. Its soil yields plenty of wheat in some places, in some barley, and others excellent cherries and pippins.

Market-towns.

Canterbury (famous for its cathedral) is the capital. Wednesday and Saturday.

Rochester f	Cranbrook f	Sevenoak f
Maidstone th	Cray w	Tenterden f
Dover w and f	Dartford f	Malling f
Sandwich w and f	Eltham m	Milton f
Romney th	Faversham w and f	Tonbridge f
Smarden f	Folkstone th	Westram w
Hithe f	Gravesend w and f	Woolwich f
Bromly th	Lenham tu	Wrotham tu
Wye th	Lidd th	Ashford f

Suffex.

A maritime county upon the Channel, with Kent to the E. and Hampshire W. in Chichester diocese, is 100 miles round. Its Downs, near the sea are charming and its vallies (called the wild of Suffex very pleasant of oats especially. The forests are barren, but the

arts yield abundance of iron, which has occasioned a
 consumption of wood. Here the roads are so deep
 in winter, that in some places, coaches must be drawn
 by oxen. This county is well watered, but with ri-
 vers of no long course. Arun is the principal. A Suf-
 carp, an Arundel mullet, an Amerly trout, and a
 Chichester lobster are much admired. And so is the
 white-ear, a bird as good as a French ortolon. Its prin-
 cipal manufactures are iron, guns and glass.

Market-towns.

Chichester, the chief, Wed. and Sat.

East Grinstead th	Petworth w
Haslings w and f	Steyning w
Rye w and f	Battle th
Arundale w and f	Hailsham f
Horsham f	Bright Hemston tu
Midhurst th	Cuckfield f
Lewes f	

Lancashire.

A maritime county in the diocese of Chester, bound-
 with the Irish sea, is 170 miles in circuit; of all
 maritime counties the least subject to fogs, and the in-
 habitants generally strong bodied. The soil is partly
 in the level, yielding good wheat and barley, and the
 bottom of the hills excellent oats. But the hilly parts
 upward are generally barren.

Market-towns.

Lancaster is the county-town, Saturday.

Blackbourn m	Haslingdon w
Cartmel m	Garstang th
Coln w	Kirkham tu
Bury th	Hornby m
Charnley f	Howstead m
Dalton f	Ormskirk tu
Rochdale tu	Poulton m
Hawkshead m	Perfscot tu

Leicestershire.

An inland county, in the diocese of Lincoln, is 9 miles in circuit, enjoys a good air, and abounds in corn and pasture, and is particularly famous for pease and beans. Pasture land is so good, that here are many farms let between 500 and 2000 *l.* a year. The sheep and horses which are sent in such numbers to London are undoubtedly the largest in England. It yields plenty of coal. Its principal rivers are the Stour, Reek, and Swift.

Market-towns.

Leicester is the county-town, Saturday.

Ashby de la zouch f	Lutterworth th
Bosworth w	Longborough th
Harborough tu	Milton tu
Hallaton th	Mountsorrel m
Hinkley m	Waltham w and th
Balsdon f	

Lincolnshire.

A maritime county in the diocese of Lincoln, bounded east with the German sea, is 180 miles in circuit. The north and west parts are the most fruitful; the east and south marshy, yet abound in fish and wild fowl.

Market-towns.

Lincoln is the chief, Saturday.

Boston w and f	Binbrook w	Dunnington f
Grantham f	Alford tu	Falkingham th
Stamford m and f	Burton m	Holbeck th
Grimsby w	Barton m	Horneastle f
Gainsborough tu	Kirton th	Louth w and
Bullingbrook tu	Bourn f	Sleaford m
Spalding tu	Tattershall f	Spilsby m
Stanton m	Wainfleet f	Salisbury m
Burgh th		

Middlesex.

An inland county, in the diocese of London, the metropolis of Great Britain, is 81 miles in circumference. It has a sweet wholesome air, and fertile soil, much improved by the compost (or dung) of London. The Thames that waters it, and separates it from Surrey, is the principal river.

Market-towns.

LONDON, the metropolis, hath markets for every day in the week.

Westminster, m, w and f	Uxbridge th
Brentford th	Enfield f
Stains f	Edgworth th

Monmouthshire.

A county in the diocese of Landaff, formerly Welch, at now reckoned among the counties of England. It lies westward on the borders of Wales, watered on the south by the Severn, which falls there into the sea. It is 80 miles in circuit; woody and hilly, but very plentiful; to which the rivers Usk and Wye, Monnow and Rumney, contribute very much. The Usk and Wye yield plenty of salmon and trout.

Market-towns.

Monmouth, the principal, Saturday.

Bergavenny tu	Chepstow f	Pontpool f
Merleton tu	Newport f	Uske m and f

Norfolk.

A maritime county, in Norwich diocese, bounded on the north and east with the German sea, is 140 miles in circumference. The soil is in some places fat, in some sandy and in others heavy. Towards the sea 'tis level, and yields plenty of corn. In other parts you have woods and heaths. Those feed abundance of cattle,

and these infinite numbers of sheep and rabbits. Its principal rivers are the Ouse, Waveney, Yare, and Thyrn. Its commodities, corn, wool, honey, and saffron, the best growing near Walsingham: its manufactures stuffs and stockings. The neighbouring sea swarms with herring. Jet and amber are sometimes found upon the coast. From Norwich to Yarmouth, about 30 miles, is all rich meadow; upon which most of the Scots runts graze, till they are fat, and then make excellent beef.

Market-towns.

Norwich, the capital, Wed. Frid. and Sat.

Lynn tu and f	Downham f	Comer f
Yarmouth f	Walsingham w	Diss f
Thetford f	Wingham f	Harleston w
Attleborough th	Ropeham f	Herling tu
Alesham f	Snasham f	Holt f
Buckingham f	Falkenham th	Wotton w
Burnham f	Fulsham th	Worsted f
Dearham f	Hingsham f	Seby every second m
Walsingham f	Caston tu	Swatham f

Northamptonshire.

An inland county, in Peterborough diocese, 120 miles in circuit, is one of the best counties in England, has a healthful air, rich, fruitful soil, abundance of inhabitants, and claims the honour of having more noble seats than any other county. It abounds in corn and cattle, wood, and salt petre. Its principal rivers are the Ouse, the Welland, and the Nen, all rising in this county.

Market-towns.

Northampton, the shire town, Saturday.

Peterborough f	Rothwell m
Brackley w	Kittering f
Daventry w	Wellingborough w
Oundle f	Trumpington tu
Towcester f	Cliff tu

Northumberland.

A maritime county, in Durham diocese, and bordering upon Scotland, is 160 miles in circumference, bounded by the sea eastward, and on the west, by the impassable mountains of Stainmore. It has a keen piercing air; is not the most fruitful, but some parts of it are very good, especially towards the sea. Here are several lead and coal mines; a multitude of monumental antiquities, with wild fowl and fish in abundance.

Market-towns.

Newcastle, the chief town, Saturday.

Berwick f	Hexham tu
Alnwick f	Wooller th
Morpeth w	Belford tu
Rothbury th	Warkworth th

Nottinghamshire.

An inland county in the diocese of York, 90 miles in circuit, has a wholesome air, and different sort of soil; for the southeast parts are fertile, the western woody, and yield abundance of pit coal. Here is the famous forest of Sherwood. The Trent and the Eddle are its prime rivers. The first parts this county from Lincolnshire.

Market-towns.

Nottingham, the county town, Wed. Fr. and Sat.

Newark w	Bingham th
Redford w	Worsnop w
Mansfield th	Tuxford in the
Southwell f	Clay m

Oxfordshire.

An inland county, in Oxford diocese, 130 miles round, has a sweet healthful air, a good soil for corn and fruit, and rich in pasture. Besides the Thames, composed of

Tame and Isis, that water this county, here is the Cherwell, Windrush, Evenlode, &c. Oxford is remarkable for a famous university, containing 20 colleges, and 8 halls, which are as follows.

University col	Founded in	872. by the Saxion King Alfred
Baliol		1262. by John Baliol, King of Scotland.
Merton		1274. by Walter de Merton, Bp. of Rochester.
Exeter		1316. by Walter Stapleton, Bp. of Exeter.
Oriel		1325. by King Edward II.
Queen's		1340. by Robert Eglesford, B.D.
New		1375. by William of Wickham, Bp. of Winchester.
Lincoln		1427. by Richard Fleeming and Thomas Rotheram, Bps. of Lincoln.
All Souls		1437. by Henry Chichley, Archbp. of Canterbury.
Magdalen		1459. by William of Wainfleet, Bp. of Winchester.
Brazen-Nose		1511. by William Smith, Bp. of Lincoln, and Sir Richard Sutton, Knt.
Corpus-Christi		1516. by Richard Fox, Bp. of Winchester.
Christ-Church		1549. by King Henry VIII.
Trinity		1555. by Sir Thomas Pope.
St. John's		1557. by Sir Thomas White, Lord Mayor of London.
Jesus		1571. by Queen Elizabeth.
Wadham		1609. by Nicholas Wadham, Esq.
Pembroke		1620. by Thomas Tesdale, Esq. and Richard Whitchurch, B.D.
Worcester		1700. by Sir Thomas Cooke.
Hartford		1740. by Dr. Newton.

Halls.
St. Edmo
St. Alban
St. Mary
New-Inn
Magdalen

Oxf
Woodsto
Bandbury
Burford
Henley

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Halls.

St. Edmond's	} belonging to	Queen's	} College.
St. Alban's		Merton	
St. Mary's		Oriel	
New-Inn		New	
Magdalen		Magdalen	

Market-towns.

Oxford, the capital city, Wed. and Sat.

Woodstock tu	Whitney th	Bicester f
Bandbury tu	Watlington f	Bampton w
Burford f	Chipping Norton f	Tame tu
Henley th	Deddington f	Charlbury f

Rutland.

An inland county, in Peterborough diocese, 40 miles in circuit. It yields plenty of corn and cattle, and feeds great numbers of sheep; the wool whereof (like the soil) is reddish, from whence this county is called Rutland; that is Red-land. Here is also plenty of wood, and several rivers; the principal of which are the Weland and Wash.

Market-towns.

Oakhampton f | Uppingham w

Shropshire.

An inland county, in the diocese of Hereford and Litchfield, bordering upon Wales, is 135 miles in compass. Here the inhabitants breathe a good air, and have the benefit of a fruitful soil, though hilly on the south and west. It yields plenty of wheat and barley, pit coal, wood, and iron. The rivers are the Roden Teme, and Severn; which last runs through the county.

Market-towns.

Shrewsbury, the county town,	Wed.	Th.	Sat.
Bishopscastle f	Blismere tu	Wen th	
Bridgnorth f	Whitchurch f	Church Stretton tu	
Ludlow m	Newport f	Oswestry m	
Wenlock m	Drayton w	Shipton tu	

Somersetshire,

A maritime county in the west of England, and diocese of Bath and Wells, 240 miles round, is one of the largest counties; plentiful of corn and pasture, most pleasant in the summer, tho' but indifferent for travellers in the winter. Whence the proverb, Bad for the rider, but good for the abider. Besides the Severn which runs into the Sea, there is the Avon, Frome, Parret, Tor, and Tone. The oxen in this county are as large as those in Lincolnshire, and the meat much preferable. This county yields also lead and copper, lapis calaminaris, chrystal that comes near a diamond, and wood for dyers. Its chief manufactures are woollen cloth and forges. At Cheddar they make the best and the biggest cheeses in England, as good as the Parmesan. The whole milk of the parish goes for the making of it, by agreement among the parishoners.

Market-towns.

Bristol, the capital,	Wed.	and Sat.
Bath w and f	Axbridge th	Ranasham th
Wells w and f	Sheptonmallet f	Crookhorn f
Bridgwater th	Somerton m	Dulverton f
Ilchester w	Wellington tu	Glastenbury tu
Taunton w and f	Brujon f	Chard m
Wincanton w	Ilminster f	Longport f
Watchet f	Dunstar f	Poutford tu
Southpaterton th	Wivelscob. tu	Writon tu

Staffordshire.

An inland county, in the diocese of Litchfield and Coventry, 141 miles in circumference; the air is sharp and

healthful, the Soil diverse : for northward 'tis hilly and barren, southward it yields plenty of corn and grass, iron and pit coal. The inland parts are level, but woody. Here is also good stone, marble, and alabaster.

Beside the Trent that waters northward, there is the Dove, Churner, Blithe, Line, Sow, and other small rivers, which make the neighbouring lands very fruitful, and the sheep that feed upon them some of the best mutton in England. Here are also some salt springs, little inferior to those in Cheshire.

Market-towns.

Stafford, the county-town, Sat.

Lichfield tu and f	Ecclishall f	Beiley tu
Newcastle m	Ridgley tu	Locke w
Burton th	Browly tu	Tudbury tu
Penbridge tu	Breewood tu	Stow tu
Luxetia w	Walshall tu	Wolverhampton w

Suffolk.

A maritime county, south of Norfolk, and in Norwich diocese, 140 miles in compass. The air is wholesome, but the soil diverse : sandy and full of heaths towards the sea, but yielding plenty of rye, pease, and hemp, and feeding vast multitudes of sheep. Further from the sea are Woodlands, otherwise called High Suffolk, which feed abundance of cattle. But the most fruitful parts are about Edmonsbury. There are a great many parks in this county. Its principal rivers are the Stour, Creon, Deben, Orwel and Blith. Here is abundance of cheese made tolerable good, but Suffolk butter is counted excellent. Its manufactures are woollen and linnen cloth.

Market-towns.

Ipswich, the principal, Wed. Frid, and Sat.

Donwich f	Stowmarket th	Lovenham tu
Orford m	Newmarket th	Mildenhall f
Alborough f	Beccles f	Biddestone w

Sudbury f	Bury w	Clare f
Eye f	Hadley m	Bungay th
Dedington f	Framlington f	Holeworth tu
Ixworth f	Lestoff w	Mendlesham ta
Needham w	Neyland f	Woodbride w

Surrey.

An inland county, which the Thames parts from Middlesex 112 miles in circuit, in the diocese of Winchester. 'Tis observed that the skirts of this county are the most fruitful; however in point of health, the middle parts have the advantage; both for the pleasure they yield by their Downs in hunting, and horse races. Besides the Thames, here is the Wye, which runs through Guildford, the Mole through Dorking, and the Wandle, all three into the Thames, the first two near Hampton Court, and the last near Richmond.

Market-towns.

Guildford, the county town, Saturday	
Ringate tu	Kington f
Southwark w and f	Croydon f
Dorking th	Farnham th

Warwickshire.

An inland county, in the diocese of Worcester, Litchfield and Coventry, is 135 miles in circuit, enjoys a good air; and plentiful soil, especially on the south, northward 'tis woody. Among its rivers Avon is the chief, which runs through the midst of it, and falls at last into the Severn. Its chief commodity is cheese.

Market-towns.

Warwick, the county-town, Saturday,		
Coventry f	Birmingham tu	Nuneaton f
Stratford th	Coleshill w	Rugley f
Atherston tu	Henly m	Southam m
Alcester tu	Kyneton tu	Suttoncolefield m

Westmoreland.

Westmoreland, in the north west of England, partly in the diocese of Chester, and partly in that of Carlisle, is 120 miles in compass. It is hilly and marshy, but not without fruitful spots of ground, especially southward. But in general it is certainly the most barren and wild county in England. The Eden, Ken, Lon and Eammon are the principal rivers. Ulles water and Winander mere, are two lakes, the first bordering upon Cumberland, and the other upon Lancashire.

Market-towns.

Appleby, the county-town, Saturday.

Kendale f

Kirkbysteven m

Longdale th

Orton f

Burton th

Brough w

Ambleside w

Wiltshire.

An inland county in Salisbury diocese, 140 miles long, is a healthful county. Northward 'tis somewhat hilly and woody; but southward 'tis pretty level. In the middle of it is Salisbury plain, noted for its large extent, and for feeding innumerable flocks of sheep. The principal rivers are the Isis, Kennet, Willy, and the Nadder. It has the chief manufacture of wool: the best broad cloths, both white and dyed, are made over this county.

Market-towns.

Salisbury, the capital, Wed. and Sat.

Chippenham f

Crickdale f

Warminster f

Andon th

Devises th

Badford m

Sluton w

Donnton f

Amsbury f

Marlborough f

Wesbury f

Auburn tu

B b

Wotton basset th	Highworth w	Swindon m
Malsbury f	Culne tu	Troubridge f
Lavington w		

Worcestershire.

An inland county in the diocese of Worcester, 130 miles in compass, yields plenty of corn, pasture, cattle, fish and fruit. The vale of Evesham is noted especially for its great fertility. Here are also several salt springs. Its rivers, the Severn, Avon, Salwarp, &c.

Market-towns.

Worcester, the capital, Wed. Frid. Sat.		
Stowerbridge f	Kiddernminster th	Tidbury tu
Evesham m	Bromsgrove tu	Upton th
Bewdly f	Parlhore tu	Shipton f
Droitwich f		

Yorkshire.

A northern maritime county in York diocese, is 320 miles round. 'Tis divided into three parts, the N. E. and W. Ridings, which last is the largest and most populous. 'Tis generally a most fruitful county, yielding plenty of corn; cattle, fish and wild fowl. Here are also abundance of fine horses, lime-stone, jet, and allum. Sureb is noted for its goats, Sheffield for iron, Richmondshire for its lead, copper, and pit coal. Its principal rivers are the Humber, Aire, Cholder, Dun, Derwent, Nye, Ouse, Swale, Youre, Warff and Tees. This county is about the size of the dukedom of Wirtemberg in Germany; and bigger than all the seven United Provinces of Holland. The manufactures here are cloths, which of late are carried to great perfection.

Market-towns.

York, the chief town, Tuesd. and Sat.		
Kingston upon	Halifax th	Pattingham f
Hall tu and f	Leeds tu and f	Hornsey f
Knaresborough w	Bradford th	Burlington f
Rippon th	Aberford w	Scarborough th

Boroughbridge T	Sherborn f	Thriske m
Pontefract f	Selby m	Northallerton w
Sheffield tu	Tadcaster th	Richmond f
Rotherham m	Wetherly th	Whitby f
Doncaster f	Shipton f	Gisborough m
Frickhill f	Ripely f	Pickering m
Bawtry f	Beverly w and f	Yarum th
Barnesly w	Freydon f	Stocksley f
Wakefield th	Howdon f	Bedjal tu
Huddersfield tu	Wighton w	Masham tu
South f	Malton tu and f	

H. W A L E S.

The principality of Wales, lyes on the W. of England (commonly reckoned a part thereof) bordering on the Irish sea, and parted by the river Dee, and a line drawn to the river Wye; in length from N. to S. about 24 miles, in breadth from E. to W. about 100.

It was first conquered by the Romans (about the same time that England was) and afterwards had a king of his own, and sometimes two, one of North and the other of South Wales; till at last the kings of England subdued them, and brought them under their power; so that it is at present under the kings of England, whose eldest son has the title of prince of Wales.

The inhabitants, as in the rest of England, are most Protestants, their language very harsh, being the same with the old British or Gallick, but the English is also much used among them; their chief commodities are wool, butter, cheese, Welch-frizes, cottons, bays, herds, hides, calves skins, honey, wax, and other such. It is divided into two parts, which are;

1. North Wales, the seat of the old Ordovices, since kingdom of Gwynedd and part of Powisland; it contains six counties, which are,

1 Flintshire	} chief towns	St. Asaph and Flint
2 Denbighshire		Denbigh
3 Isle of Anglesey		Beaumaris
4 Caernarvonshire		Caernarvon and Bangor
5 Merionethshire		Harlech
6 Montgomeryshire		Montgomery and Welshpool

St. Asaph is the chief town of the whole.

2. South Wales, the seat of the old Dimetæ, and part of the Silures, since the kingdom of Debenbarch, and part of Powisland; it contains six counties, viz.

1 Cardiganshire	} chief towns	Cardigan
2 Radnorshire		New Radnor
3 Pembrokehire		Pembroke and St. David's
4 Carmarthenshire		Carmarthen
5 Brecknockshire		Brecknock
6 Glamorganshire		Cardiff and Landaff

Pembroke chief of the whole.

Rivers of principal note are Wye and Dee.

Principal mountains are those called Snowdown hill and Plinlimmon.

Archbishopricks 0, Bishopricks 4, Universities 0.



III. S C O T L A N D.

The kingdom of Scotland is the rest of the island Albion or Great Britain, and lies on the north of England, from which it is parted by the rivers Tweed and Solway, and the Cheviot hills; in length from Don by head to the S. of Galloway 250 miles, in breadth from Aberdeen to the isle of Mull 150 miles.

The inhabitants are Protestants, and those chiefly Presbyterians; their language is in the south parts a corrupt English, and on the N. and W. parts a dialect the Irish; their chief commodities are most sorts of

in great abundance, much linen cloth and tallow, vast numbers of cattle and hides; as also excellent honey, lead oar, iron, train oil, coarse cloths, frizes, &c.

It is divided into two { S. the Firth } { Edinburgh }
classes, viz. { N. the Firth } { Aberdeen }

Galloway _____
Nithdale _____
Annandale _____
Elsdale with Ealsdale _____
Liddisdale _____
Tivisdale _____
The Mers _____
Lauderdale _____
Tweedale _____
Clydisdale _____
Kyle _____
Carrick _____
Lothian _____
Stirling _____
Renfrew _____
Cunningham _____
Isles of { Bute _____
 { Arran _____
Peninsula of Cantyr _____

Chief Towns

Kirkcudbright _____
Dumfries _____
Annand _____ } W to E
 _____ }
Hermitage _____
Jedburgh _____
Duns _____
Lauder _____
Peebles _____ } E to W
Glasgow _____ }
Ayr _____ }
Gurgenny _____
Edinburgh _____
Idem _____
Idem _____
Irvine _____ } E to W
Rothsay _____ }
 _____ }
Kilzeran _____

Fife _____
Menteith _____
Lennox _____
Argyle _____
Perth _____
Strathern _____
Broadalbine _____
Lorn _____
Merns _____
Angus _____
Gaury _____
Athol _____
Mar _____
Badenough _____
Lochaber _____

St. Andrews _____
Dunblain _____ } E to W
Dumbarton _____ }
Inverara _____ }
Idem _____ }
Abernethy _____ } E to W
 _____ }
Duollafnage _____ }
Bervy _____ }
Dundee _____ } E to W
 _____ }
Blair _____ }
Aberdeen _____ }
Ruthven _____ } E to W
Inverlochy _____ }

N. comprehends	Buchan	Chief Towns	Peterhead	E to W
	Bamfe		Idem	
	Murray		Elgin	
	Rofs		Tain	S to N
	Sutherland		Dornock	
	Strathnaver		Strathy	
	Caithness		Wick lying N E of Strathnaver	

These are the various divisions of Scotland, according to the best maps, and the manner how they are found. But since that kingdom is ordinarily divided into sheriffdoms, stewardries, bailiaries, and one constabulary, we shall also consider it in that respect; and seeing each of these sheriffdoms and stewardries, &c. comprehend either a part, or one or more of the said divisions, we shall here subjoin all the sheriffdoms and stewardries, &c. of the whole kingdom, and annex to each of them their whole content, whether more or less. Therefore,

Sheriffdoms of Scotland are those of	Edinburgh	Containing	Middle Lothian	Sheriffdoms of Scotland are those of
	Berwick		Mers and bailiary of Lauder	
	Peebles		Twcedale (dale)	
	Selkirk		The forest of Ettrick	
	Wigtoun		The N. and W. parts of Gal-	
	Renfrew		Barony of Renfrew (loway)	
	Lanerick		Clydisdale	
	Dumbrilton		Lennox	
	Bute		Isles of { Bute	
	Stirling		{ Arran	
	Linlithgow		Stirling, on both sides the river	
	Clackmanan		West Lothian (Fort)	
	Kinross		The E. parts of Stirlingshire	
	Coupar		The W. parts of Fife	
	Forfar		The rest of Fife	
	Kincardine		Angus, with its pertinents	
	Elgin		Merns	
	Nairn		The E. parts } of Murray	
	Wick		The W. parts }	
	Orkney		Caithness	
			Isles of { Orkney	
			{ Zetland	

Aberdeen cont. { Mar, with its pertinents
Buchan
Strathbogie

Perth cont. { Perth
Athol
Gaury
Broadalbine
Menteith
Strathern } As also { Glenshee
Strathandale
Ramach
Balwidder
Glenurquhy
Stormount

Inverara cont. { Argyle
Lorn
Cantyr
Hles W. of { Lorn
Cantyr

Bamfe cont. { Bamfe
Strathdovern
Boyn
Enzy
Strathawn
Balveny

Inverness cont. { Badenough
Lochaber
The S. parts of Ross
Part of Murray beyond Nairn

Tayne con. { Sutherland
Strathnaver

Roxburgh cont { Tiviotdale
Liddisdale
Eisdale with Eusdale

Ayre cont. { Kyle
Carrick
Cunningham

Dumfries } cont. { All Nithsdale
Cromarty } A little of Ross, S. of Cromarty

Besides those sheriffdoms, there are { Stewardries
Bailiaries
One Constabulary

Stewardries are { Strathern
Menteith
Annandale
Kirkcudbright } cont. { Strathern
Menteith
Annandale
E. and S. parts
of Galloway.

As also { St Andrews
Killinure
Abermethy } in { Fife
Angus
Perth

Bailiaries are { Kyle
Carrick
Cunningham
Lauderdale } cont. { Kyle
Carrick
Cunningham
Lauderdale

The one constabulary is that of Haddington, containing East Lothian.

Principal rivers are Tay and Spey.

Mountains of greatest note, are the Cheviot hills, and those of Albany.

Chief lakes are Lomon, Ness, and Tay.

Archbishopricks 2, Bishopricks 12, and Universities 4



IV. IRELAND.

The kingdom of Ireland, an island lying on the W. of England and Wales; in length from the N. parts of Antrim, to the S. parts of Cork, 285 miles; in breadth from the E. parts of Down, to the W. parts of Mayo, 160 miles.

The inhabitants are both Protestants and Papists; their language, a dialect of the old British, intermixed with Norwegian, Danish, and English; the English

also frequently used among them, and in some places a mongrel speech between both; their chief commodities are cattle, tallow, butter, cheese, honey, wax, salt, hemp, linnen cloth, pipe staves, wool, frizes, &c. It is divided into four provinces, which are,

1. Ulster, 2. Connaught, 3. Leinster, 4. Munster, or Mounster.

Rivers of note, or Shannon, Barrow, Shur and Blackwater.

Chief mountains are Knock Patrick, Slaw Bloemy, and Curlew hills.

Lakes of greatest note are Lough Earn, Lough Neigh, and Lough Corrib.

Archbishopricks 4. Bishopricks 18. University 1.

Lesser British islands are,

1. The Orkades, or Orkney islands, on the north of Scotland. The number of them is indeed very great, 26 of them are inhabited, and the rest called Holms, are used only for pasturage. Most of them are blest with a very pure and healthful air to breathe in, but their soil is very different, being in some extremely dry and sandy, in others wet and marshy; however they are indifferently fruitful in oats and barley; the chief of them are Hoy, Mainland, Sapinsha, and Westra; the chief town is Kirkwall in Mainland. These islands have been visited by the Picts, and subject to the Danes; but Chrillian IV. of Denmark, having quitted all his pretensions to them in favour of James IV. of Scotland, they have ever since acknowledged allegiance to the Scots crown.

2. Zetland. Under this name are comprehended 46 islands, with 40 Holms, besides many rocks. Of these islands, about 26 are inhabited, the rest being used for feeding cattle. The chief of them are Mainland and Yell; the chief town is Ylesburg in Mainland.

3. The Hebrides. They surpass 300 in number, the most remarkable of which are Jona and St. Kilda.

4. Man on the west of England.

5. Wight on the south of England, &c.

Management of HORSES.

THE necessity every traveller lies under of having some knowledge of the art of managing his horse, and the many inconveniences frequently attending the want of this knowledge, are so evident, that nothing need be said to evince the usefulness of this article: I shall therefore without any further preamble, give a few hints to assist my readers in buying such horses as are fit for the road, and then treat of their management under the accidents and disorders to which they are liable.

As to the first part of this task, it is the more necessary, since whoever would buy a good horse, must know how to choose him himself, and never place the least confidence in the words of a jockey or dealer in horses.

Rules for buying Horses.

IF a horse is young, his tusks will be sharp-pointed and grooved, or hollowed on the inside: but the jockies have the art of burning the corner teeth of an old horse, after they have been cut with a graver by which means they imitate the mark, and frequently deceive; yet the cheat is discoverable by other signs: as, when he has white eyebrows, he may be supposed to be about 15 or 16 years of age: the age of a horse may also be known by the length and yellowness of his teeth, the seannells of the roof of his mouth, and the narrowness of the under jaw.

But it is not sufficient that you are not deceived in buying an old horse for a young one, the eye is carefully to be examined, lest you should buy a horse that

blind, or that has some defect in his sight. The best is of a hazel colour; and it is an advantage to have rather large than small: the part commonly called the white of the eye, should be perfectly bright and clear, without the least dimness, so that you may see the bottom, and the image of your face reflected from thence, and not from the surface; and you should also observe upon changing the situation of the horse with respect to the light, you can discern the sight of the eye contract and dilate itself. This, added to the clear transparency already mentioned is a proof of the goodness of the eye.

But to proceed. Every man who buys a horse, should choose one whose size and strength are in proportion to the weight he is to carry: but in general, a middle sized horse is best for the road, and one of 14 hands and an inch is of sufficient strength to carry any man under 15 stone.

After the jockey has exercised his horse before you, you should ride him yourself two or three miles on a rough, uneven road, when you should give him his head, without forcing him by whip or spur to perform with more life and spirit than he is otherwise inclinable; if he walks, trots and canters nimbly, without dwelling on the ground, taking up his fore feet moderately high, stepping longer or shorter, according as he finds there is occasion, and going near before and wide behind, he is likely to carry his master well. But it must be remarked, that the best proof of the excellency of a road horse is his trotting down hill, where it is pretty steep; for if he is able to perform this well he is able to trot on any ground whatsoever.

Captain Burdon, in his Pocket Farrier, advises those who want to buy, to observe that the horses knees are not broken. This is a very good caution, and it is what every people are, or ought to be aware of; yet as one who is a common stumbler may have an accidental fall, you should observe whether the knees are covered with hard corns, which if they be, and the hair is curled about them, is a certain proof of his being an old offender. If a horse goes clean, it is a pretty sure sign that he

moves well upon his limbs; therefore when you see a person alight at an inn, with his boots tolerably free from dirt, you may almost venture to buy his horse without seeing him exercised.

The horse that has his breast full and prominent is very unfit for travelling; therefore, before you buy a horse, stand in a right line with his head, and mind that his breast don't keep his knees too far asunder; for the nearer he stands with his knees, provided he does not cut, the more reason have you to judge that he will travel expeditiously, therefore take particular notice that his breast be narrow, thin, and lean, his shoulder-point not projecting forwards, and his fore legs straight and almost perpendicular.

To conclude this article, there is scarce a better property in a horse than a sound, tough hoof, that will abide hard roads without much heating. A sounder hoof is very often long and deep, and shaped more like that of an ass than of a horse; but the good hoof is firmicular, and rather flat than otherwise.

Rules for travelling, with Directions for preventing and curing the Disorders Horses are incident to on the road.

When you set out on a journey, observe whether the shoes be fast, whether they sit easy, or whether they do not cut either before or behind. If a horse cuts with bad thin shoes, he will probably do it while he is fresh shod; but this may sometimes be helped by a good smith.

Most of the disorders to which horses are subject, are produced by the negligence or ignorance of the rider, and as they may be easily prevented by a proper care, they are cured without difficulty, if taken in time. It is true it is much more easy to prevent diseases than to cure them; for if a horse be well curried, brushed and wiped down with a cloth, morning, noon and night, and duly exercised and well fed, he will be seldom out of order.

The advantage of currying and rubbing down is inconceivable; it promotes a due circulation of the blood, opens the pores, and consequently prevents a stagnation of the fluids, promotes perspiration, and is the readiest way of preserving health.

The most common causes of grease and scratches, are the carelessness, the nastiness and indolence of the groom; for unless the blood is kept in a balsamic state by proper exercise, clean, sweet and liberal feeding, that fluid, from which all the humours in an animal body are derived, must consequently become depraved. Exercise ventilates the blood, so, keeping the skin clean and smooth, occasions an easy perspiration thro' the pores: for if after hard riding we suffer our horses to lie with the sweat drying upon them, we run the risk of a violent surfeit, which is in fact the cause of most of the distempers incident to either human or brute creatures.

As we have mentioned liberal feeding, it may not be proper before we proceed farther to mention what quantity of oats, &c. a man should allow his horse on the road.

A full-sized horse that has a good appetite, and travels hard, may be allowed every day about six quarts of oats, half a pint of split beans, and a good handful of hay mixed together.

What is here said with respect to the quantity of oats necessary for a sized horse, may be a sufficient guide as to what should be allowed those of fourteen hands or under; therefore I shall only add, that he who will not allow his horse the quantity of oats, &c. here mentioned, should ride slowly and make short stages.

As we have been just mentioning the quantity of corn necessary to be given to a horse on a journey, I shall give the young traveller some hints relating to his watering his horse on the road, and then proceed to give directions for the cure of those disorders which are occasioned by the want of following these rules.

When a horse travels he perspires very much, and may therefore be allowed to drink a little now and then, as opportunity offers, and this will greatly refresh him; you should never let him drink much at a time, for

if you suffer him to drink his fill, he will become dull and sluggish; and besides, if he be very hot, it may be attended with very bad consequences. However, when you come within a mile and a half, or two miles of the place you intend to bait at, either at noon or night, he may drink more freely, going a moderate trot afterwards, for by this means the water will be well warmed in his belly, and he will go in cool. Yet, carefully observe that if there has been no water, or he has not drank on the road, never suffer your horse to be led to water, to have his heels washed immediately after you arrive at your inn; but let him have water luke-warm after he has stood some time in the stable; for much mischief has been frequently done by imprudent riders, who after having travelled hard, have let their horses drink as much as they would, just after going into the inn or town where they intend to lye.

These observations relating to currying, feeding and watering your horse, if carefully observed, will be of great service, and contribute more than any thing else to preserve him in perfect health.

How to save a Horse's Back from galling

Young horses that have not been used to have their backs pressed, are most subject to gall and warble, and therefore we cannot take too much pains in fitting the saddle and suiting it to the shape of the back, so that it may bear as equally as possible upon all parts at the same time.

As soon as an inflammation is found to be coming, which may be known by some places under the saddle sweating, or continuing moist longer than others, especially if the back be viewed some hours after the saddle has been taken off, these places should be eased by moving the stuffing, that the weight of the rider may press upon other parts that are not so much heated. Vinegar, urine, salt and water, &c. are frequently used to cool a horse's back that has been hurt by being overheated; but if the skin be broke in holes, it would be better to use equal quantities of spirit of wine and tincture of myrrh and aloes, with a little oil of turpentine.

and bathe the place with it now and then. There will be small holes in these tumours (which are called warbles) before some people would imagine it; but if you use the said tincture, you may proceed on your journey; you ought however to look frequently at your horse's back, and not hing upon him so as to make the inflammation spread. It would also hasten the cure if you should every hour walk a while on foot, and bathe the horse's back with vinegar, or any thing else that is an enemy to putrefaction.

On the Navel-Gall.

THE swelling called the Navel-gall is a tumour on the vertebræ, or bones of the back, and is occasioned by a contusion of the saddle-tree, which for want of stuffing the pannel, it has rubbed and frigg'd the horse's back. To prevent this, you should frequently, when riding, put your fingers before and behind your saddle, to feel whether it pinches the horse, that you may remedy this disorder in time, by getting your saddle chambered, or hollowed, to prevent its pressing the injured part. But when, through the negligence of the rider, the horse happens to be crushed either before or behind the saddle, and that it swells much, you should, as in all other tumours occasioned by bruises) endeavour to disperse it, by applying warm, greasy poultices, scalded bran and hogs lard, boiled turnips, or the like. Tho' if the bruise be slight, it may yield to cold applications, as whites of eggs, wheat flower, bole armeniac and vinegar laid thick upon a piece of leather, bigger than the swelling, and renewed as it dries; but if the hurt be very slight, the humour may be dispersed by washing the place with vinegar, or salt and water

How to cure a Crush on the Navel-Gall.

Crush on the navel-gall frequently becomes what is termed an encysted tumour; the matter that it is contained in a strong skin or bag; and this

kind of swelling frequently remains for years after the hurt is received, unless they are carefully cut out by the farrier. The method of cure is to make a long incision and to cut out the bag of matter, skin and all, and then to heal the wound with the following ointment.

The common Wound Ointment.

Take common turpentine, half a pound; honey, one pound and a half; Burgundy pitch, twelve ounces; and hogs lard, half a pound; melt these well together; and when it has been taken a while from the fire, stir in an ounce of French verdigrease in fine powder, and keep stirring till it is as thick as honey, or, till the powder cannot sink to the bottom.

Of swelled Legs.

SWelled legs in horses is one of their most common grievances, and it must be acknowledged that some are by far more apt to swell in the legs than others; but when a horse's legs swell and will not yield to good keeping, clean dressing, &c. without the help of medicines, the case is bad; but the following purge may be of service.

Take one ounce of common aloes, half an ounce of diapente, three drams of species-hieræ-picæ, one dram of diagridium, 100 drops of oil of aniseed, and as much treacle as will make it into a stiff ball, to be rolled in liquorish powder or flower of brimstone, and given to the horse in the common way, working it off with warm water and oat meal, when the medicine begins to operate.

The above dose, with respect to the quantity of the aloes and diagridium, may be enlarged or diminished according to the horse's age and strength; but it is not safe to increase the diagridium above the quantity of two drams: but a horse that is lean and weak should only be once or twice purged with the following preparation

and afterwards he should take strengthening medicines to restore his fibres to their natural tone and elasticity.

Take of succotrine aloes, one ounce and an half; extract of cassia, one ounce; of senega in powder, three drams; cinnamon, cloves, nutmegs and galengal root, powdered, of each two drams; mix, and with as much syrup of roses-solutive as is necessary, beat the whole into a stiff mass to be formed into two balls, which are to be given the horse in a morning, washing him down with a little warm ale, keeping him from his meat at least half a day.

If your horse is strong and full of flesh, and really requires purging, he may in such case bear the common dose: but it is a necessary caution, that when the first dose does not purge, a second should not be immediately given; for by this management many horses have lost their lives; and it is a general rule, always to keep under the common dose of any medicine, till we are thoroughly acquainted with the temperament and constitution of the creature we have to deal with.

Of the Scratches.

THE scratches are a painful distemper, and in many respects are agreeable to what is termed kibe in human bodies; and this generally proceeds from the carelessness and nastiness of the groom; so the grease is mostly occasioned by his negligence, in suffering the scratches to grow to too great a height. Yet, according to Dr. Bracken, the scratches differ from the grease, in that the first require rest, a large stall, and a proper ointment, whereas the grease (without the scratches) is better after moderate riding. Experience informs us, that motion prevents the closing of all kinds of wounds; and is equally certain that an horizontal posture of the body or limb wounded, is greatly preferable to a depending one; for these reasons, a sore on the back part of the fetlock, the part where the grease and scratches happen, requires care and patience. For this reason, a horse who has the grease or scratches, or wounds swelling in the legs, will not lie down, he must sit.

ther be forced to it, or covered with a cloath and turned out in the day; for when a horse is turned out from a warm stable into a field, the coolness of the air causes such a contraction of the fibres and the muscular parts as puts a stop to the influx of the humours, by which means an inflammation and stagnation of the blood and juices are prevented; but before he is turned out, his heels ought to be well washed with warm water, and anointed with the following ointment.

An Ointment for the Scratches.

Take of white ointment, two ounces; Flanders oil of bays and quicksilver, each half an ounce; melt the white ointment a little, then stir in the oil of bays, and then stir in the quicksilver, and keep stirring till all be so cold that the last ingredient cannot sink to the bottom.

N. B. Before this ointment is applied the hair should be clipped away from the sores, the legs washed perfectly clean with pretty warm water, and the part well dried.

Dr. Bracken asserts, that inward medicines are not absolutely necessary in the cure of the scratches or grease and assures us, that he durst undertake to cure these disorders sooner by turning out, good feeding, clean dressing, and letting the horse have a double stall in which he may lye at his ease, than by any other method whatsoever.

Of Gravel in the Hoof.

IF a smith drives a nail into the quick, it naturally becomes festered and inflamed, and the sand or gravel in the roads working up the nail hole, render him perfectly lame: and it is a general rule, that whenever any foreign matter happens to be lodged in any part of the animal machine, it should be taken out as soon as possible as carefully as possible. The greatest care should be taken not to cut, pare, or scrape the hoof more than necessary, it being sufficient to cut away what is black

and discoloured, and then to dress the wound with the following balsam.

Vervain's famous balsam for curing Wounds or Pricks.

Take balsam of Peru; half an ounce; gum Benjamin, half an ounce; storax, three drams; succotrine aloes, three drams; choice myrrh, six drams; powder them; and after putting them into a wide mouthed pint gooseberry bottle, pour upon them one pint of rectified spirit of wine, and corking it loosely, set the bottle in sand in an iron pot over a middling fire, keeping the spirit pretty warm for 24 hours; after which you may keep it close stopped, and decant it off clear as you want it.

The method of applying this excellent composition, is, to dip into it a piece of lint or tow, and then fasten it on the part, cleared of the gravel, &c. and renew it as it grows dry. But if this cannot be easily procured, the part may be dressed with the following ointment.

An Ointment for a gravelled Horse.

Take of turpentine, two ounces; rosin and Burgundy pitch, of each an ounce; bees wax, an ounce and a half; fresh butter four ounces; French verdigrease finely powdered, half an ounce; clarify the butter, and after melting the hardest substances first, put in the other, and last of all the powdered verdigrease; and stir the whole about till it is almost cold, otherwise the ointment will be more sharp at the bottom than at top.

On a Clap in the Back-Sinew.

A Clap, or more properly a strain in the back-sinew, is frequently occasioned by a horse's getting his foot into a hole in the road, when having a heavy load on his back, he often catches himself so hastily upon stumbling, that he strains the back sinew or tendon behind his fore leg. This disorder is frequently mista-

ken by the farriers for a shoulder slip: but captain Berdon gives a very good rule to distinguish the difference. If the back sinew be split, says he, the horse will lift his toe off the ground and step short; but if the shoulder, he will drag his toe as he walks.

The cure of a strain in the back-sinew is best accomplished by cooling applications, and will be much sooner effected if your horse will lye down and ease his leg. When the disorder is slight, this alone will be sufficient.

A Cure for a Clap or Strain in the back Sinew.

Take four ounces of bole armoniac, and ten whites of eggs; stir these well, and add thereto as much strong red or white wine vinegar as will reduce it to the consistence of a pretty stiff poultice; and then after the leg has been well bathed and washed with warm water, and wiped dry with an easy hand, spread the preparation on thin leather all along the sinew and part affected. This must be repeated as it dries.

Sir William Parsons's Receipt for the Cure of a Strain, either of the Back Sinew or the Shoulder.

Take common Barbadoes aloes, dissolved in as much hot water as will make it of the consistence of a plaister; when spread on a piece of thin leather, apply it to the part affected; and bind it easily on.

A Receipt for a Shoulder Slip.

Take oil of turpentine, two ounces; oil of swallows and petroleum, of each half an ounce; mix these together, and having heated the shoulder and opened the pores of the skin, by holding a flat iron pretty hot, at about a span distance, let it be well rubbed in.

Strains frequently happen on a journey, without any sensible heat or swelling, so that the part affected is frequently mistaken by the farriers; but in all cases of strains, it is absolutely necessary to suffer the horse ci-

ther to rest intirely, or to make small and easy stages; for where accidents of this kind happen, nothing can be worse than motion. The common practice of rowelling for strains, according to Dr. Bracken, is of no real service; since, tho' the lameness goes off after rowelling, it is not the number of rowels, but the rest from business and the length of time that perform the cure.

Of Strains in the Fillets.

When a horse has a strain in the fillets, it may be known by his dragging his hinder feet after him, his hitting his toes on the ground, and his wriggling as if he would fall. The age of the horse and the violence of the strain will render the cure the longer in performing.

A Receipt for a Strain in the Fillets.

Melt some pitch, rosin and turpentine together, and pour it all over the fillets pretty warm, and then clap over it a parcel of tow.

For Strains in the Fetlock.

Take the lees of wine, either red or white, or wine vinegar to the quantity of about half a pint, and add thereto one pound of common bole armoniac in powder; to these put the whites of six eggs; beat all well together, and apply it thick in the manner of a poultis, and renew it as it dries. If the powder be too much or too little for the wine lees, it may be altered so as to make it of the consistency of thick honey.

Of Windgalls.

THE cure of windgalls chiefly consists in cooling the parts, and suffering the horse to lye idle rather at grass than in the house. The above charge for strains in the fetlock may be of great service. Or, the fetlock joints may be rubbed now and then with tar.

Of Colds.

Colds generally proceed from giving cold water to horses, when hot, or in letting them cool too suddenly; and many horses have become phthisicky, and even broken winded, by being rid, when in a sweat, belly deep in cold water. Colds generally affect those parts of the body which are most susceptible of impression, as the brain, lungs, and guts of animals; for when that matter which ought to be perspired, is retained in the blood, by the closing of the pores of the skin, nature endeavours to throw off what is hurtful, by other outlets, such as the nose, mouth, fundament, urine, &c. and therefore it is the business of the physician and the farrier to assist nature in promoting some of these discharges. And therefore, when a cold is violent, as an over great fullness is brought on from the perspirable matter lodged in the veins being obstructed, bleeding must be highly proper. But there is nothing better for a horse that has got a cold, than the following cordial ball.

A cordial Ball for Colds, proper to prevent or cure most Diseases in Horses, when there are no symptoms of a Fever.

Take aniseed and caraway seed, finely powdered, of each one ounce; greater cardamum seed, half an ounce; flower of brimstone, two ounces; turmeric, in fine powder, one ounce; saffron, two drams; sugarcandy, four ounces; Spanish liquorish dissolved in byssop water, two ounces; oil of aniseed, half an ounce; liquorish powder, one ounce and an half; wheat flour, as much as is sufficient to make all into a stiff paste; and when the whole has been well beaten in a mortar, it may be tied up in a bladder, and kept for use.

This ball, when used for a cold, must be dissolved in stale beer, milk warm, and about one ounce for a dose given twice a day for the space of a fortnight; or else

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Instead of dissolving it, it may be put between his grinders, when you should let him chew upon it for an hour or two without eating hay or grass, and afterwards give him oatmeal and water lukewarm, stirring them gently about both before and after watering.

If a horse seems griped in the guts from the same cause, let him have the following warm drink given him.

A cordial Drink in a Cold.

Take two ounces of the above ball, half an ounce of grains of paradise, in powder, and a quarter of an ounce of long pepper, with a large nutmeg grated, and mix all up with a quart of strong, mellow ale, and give it the horse in a horn, and then keep him tied up from food for two hours; but first, he must be rid about a little, on a full trot, to shake his guts, and let loose the imprisoned wind.

If the horse is bound in his body, about twelve hours after his taking the above cordial drink, you may give him the following clyster.

A Clyster for Griping in the Guts.

Take mallow leaves and pellitory of the wall (either green or dried) of each three handfulls, caraways seeds bruised, and aniseeds, of each one ounce, ground ginger, half an ounce, the electuary called cayocostinum, one ounce; boil the herbs and seeds well in two quarts of water, to three pints, then add the ginger and the electuary, and put a quarter of a pound of fresh butter, and one ounce of Epfom salt to the whole. Let this be injected very warm, and the horse's tail tied down between his thighs for a good while.

In case the guts are agitated with painful twitches and convulsive contractions, which makes the horse tumble about and strike his feet against his belly, to the above clyster may be added, half an ounce of philonium romanum.

These remedies, together with care and patience, warm masses of malt, bran, and the like, will restore your horse to health; but observe that he ought to have a wide stall, and clean, warm bedding.

Another excellent Receipt for the Cure of Gripes.

Take twenty grains of London laudanum, dissolve it in an ounce of brandy, then mix it with a pint of white wine, and add two ounces of diascordium; give it your horse in a horn milk warm, and clothe him well. Let him rest twenty four hours after it, and drink plentifully of warm water and oatmeal, for he will be very thirsty the day after he has taken it.

On Scouring or immoderate Purging.

Scouring or purging on the road may be remedied by keeping the horse to dry food and less water than common; but this must be continued for a long time with proper exercise, and a full allowance of oats and split beans.

A horse of a lax constitution being taken from grass to go a long journey, should have the following preventive physic given him in his provender.

A Powder against Scouring or over Purging.

Take galls, powdered (such as we make ink with) two ounces, and of the powders of Japan earth and Lemnian earth, of each an ounce; mix, and keep them in a bladder for use. The method of using it is to sprinkle a little water upon the horses oats, and after rubbing them a while to throw amongst them half a spoonful of the powder.

If a horse from foul feeding, catching cold, &c. purges upon the road, give him the following drink.

Of the Management of Horses.

A Drink for a Horse which scours from foul feeding, &c.

Take one ounce of Venice treacle, boil it in a quart of stale beer till one third is evaporated, then add half an ounce of true Armenian bole in powder, and two ounces of common treacle to make it palatable; then give it the horse in one dose, and repeat it as necessity requires. If it be too weak to overcome the distemper, an hundred drops of liquid laudanum, and half a gill of strong cinnamon water may be added; but in the last case he should not travel for some days.

On a Cold in the Head.

When the brain is much loaded from the cold, take some of the following powder, and blow it through a piece of elder wood, pretty high up the nostrils.

A Powder to make a Horse's Nose run in a Cold.

Take assarabacca * dried, half an ounce, and of the powder of margerum, one ounce, mix these together, and blow it up the horse's nostrils twice or three times a day, keeping his head and throat well covered, to prevent his getting more cold.

As the eyes are subject to various accidents on the head, particularly from the cut of a whip, a remedy for these disorders cannot be unnecessary. All wounds in the eye, if curable, will yield to the following application.

A Receipt for Curing Wounds on the Eyes.

Take half an ounce of the greyish coloured lapis ca-

*This is an herb shaped like the garden scurvy grass, but it is larger, and of a darker green.

laminaris, finely powdered, of lapis tutize, two drams, of white vitriol, burnt, one dram and a half, and about one scruple of French verdigrease, reduce these into a fine powder, and mix them well with about one ounce of fresh butter. When you make use of it, warm this ointment, dip a feather in it, and apply it morning and evening to the sore. This must be continued for a good space of time, because wounds on the eyes are long in healing.

Or when the horse's eye happens to be hurt with a lash of a whip or twig, you may blow in the following powder night and morning.

For a Hurt on the Eye.

Take of lapis calaminaris and lapis tutize, finely powdered, of each two drams, white vitriol and allum, finely powdered and then burnt together in a very clean, red hot fire shovel, each half an ounce, mix all these together, and keep the whole in a bottle well corked, but observe, that the bottle ought not only to be dry but well warmed before you put it in.

If the eyes be rheumy and bloodshot, and the horse has symptoms of pain in his head, bleeding will be necessary, and the following eye water may be applied.

An excellent Eye-Water.

Take four ounces of rose water, and about three drams of the aforesaid eye-powder mixed and dissolved in it; squirt it into the eyes by the help of a syringe.

The water is best for rheumy bloodshot eyes, when there is no speck or film; and the powder where there is; but observe, the eye always looks worse while the powders are using.

A Cure for a Swelled Neck.

When a horse's neck happens to swell by getting cold after bleeding, the following softening poultice is the best remedy that can be applied.

Take mallow and marsh mallow leaves picked clean from the stalks, of each ten handfuls, white lilly roots, half a pound; lintseed and fenogreek seed, of each two ounces, ointment of marsh mallows, six ounces, and of hogs lard, half a pound. The leaves and roots should be boiled well, and the water pressed from them; then beat them up to a pulp in a mortar, and let it stand till you have made a jelly of the seeds by bruising them well, and boiling them in a quart of water to a pint; this you must beat up with the former; and lastly add the ointment and hogs lard, and when all are mixed thoroughly, it may be kept in a large bladder or pot for use.

This is an excellent poultice for all hard swellings, either in man or beast: when applied, it should be warmed well before the fire, spread thick over a piece of linnen, applied all over the tumour, and renewed as it becomes dry.

If a swelling of a horse's neck, after bleeding will not disperse, it should be opened when sufficiently soft, and dressed with the common wound ointment, before recommended for healing the navel gall, and the poultice continued till the hardness is dissolved.

When a horse is under cure for these kind of swellings, it is best to give him mashes of malt, warm grains, and warm water, with a good deal of oatmeal in it, and he will eat a little hay, it should be sweet, soft, meadow hay, sprinkled with clear water; or, in summer, cut grafs.

A Receipt to cure Worms.

The best remedy for the cure of worms is æthiops mineral, which ought to be thus prepared. Take four

ounces of flower of brimstone, and the like quantity of quicksilver; melt the brimstone slowly in an iron laddle and stir in the quicksilver over a gentle heat, till it is incorporated; then take it off, and stir it till almost cold afterwards stir them well together in an iron or stone (not a brass) mortar, till they become a black powder. Give the horse as much as will lye on a half crown piece twice a day in his corn, which must be first wetted to make the powder stick to it. This medicine must be continued a week or longer.

A Remedy for the Gravel.

If your horse has the gravel in his kidneys, ureters or bladder, he will seem weak in the fillets, stale often and with difficulty, and but little at a time.

Take an ounce and a half of the cordial ball above mentioned: sope of tartar, one dram; of Matthew pill, one dram; or if the horse be lusty and strong, dram and a half; beat those well together, and with liquorish powder make it up into two balls, and mix it with a little stale beer and some treacle, give it for dose out of a horn.

This medicine, if the symptoms are violent, may be repeated once in twenty four hours; and every two or three hours water luke warm should be offered him.



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ART of PAINTING in Oil;

To which is added, the whole Art of Gilding with Gold and Silver, mixing Water-Colours, &c.

A Catalogue of the several Colours used in
Painting with Oil.

W H I T E S.

THE principal of all whites is white lead.

Of this colour there are two sorts, the one called ceruse, which is the most pure and clean part, the other is called by the plain name of white lead.

Besides white lead and ceruse, there is another sort to be met with sometimes, which they call flake-white.

B L A C K S.

Lam black.

Lamp, or candle black.

Ivory black.

Willow charcoal.

R E D S.

Vermillion is the most delicate of all light reds, being of itself a perfect scarlet-colour.

Lake, especially the richest sort, is the best of all dark reds, being a most pure crimson.

Red lead is the lightest of all reds now in use; 'tis a sandy, harsh colour, and such a one as is not easily ground very fine, altho' you bestow much labour on it.

Spanish brown is a dark, dull red, of a horse-flesh colour, 'tis an earth, it being dug out of the ground, but there is some of it of a very good colour, and pleasant enough to the eye, considering the deepness of its colour: it is of great use among painters, being generally used as the first or priming colour, that they lay upon any kind of work, being cheap and plentiful, and a colour that works well, if it be ground fine, as you may do with less labour than some better colours do require; the best sort is the deepest colour, and freest from stones; the other sorts are not so good to give a colour to the eye, but yet they serve as well as any others for a priming colour.

Y E L L O W S.

Yellow oaker is of two sorts, one called plain oaker, and the other spruce oaker, the one is a much lighter colour than the other.

Pink yellow.

Orpiment is that colour which some call yellow arsenick.

Masticote is a good light yellow for most uses, especially in making greens, of which several sorts may be framed out of this colour being mixed with blue.

G R E E N S.

Verdigrease is the best and most useful green of all others.

Green bice is of a sandy nature, and therefore not much used; green verditer is also a sandy colour, neither of them bear any good body, and are seldom used but in landships, where variety is required.

B L U E S.

Blue bice bears the best body of all bright blues used in common work, but 'tis the palest colour.

Blue verditer is a colour of no good body, but something sandy, and of no very good colour itself, being apt to turn greenish, and being mixed with a yellow makes a good green.

Indigo is a dark blue, if worked by itself, to remedy which, whites are usually mixt, and then it makes but a very faint blue.

Note, That the longer this colour is ground, the more beautiful and fair it looks.

Smalt is the most lovely blue of all others.

Note, That of this colour there are two sorts, the finest is that which is called oil smalt.

Umber is a colour that really has no affinity with the others above mentioned, being neither white, black, red, yellow, blue or green, yet it is a colour of as great use as any of the rest in common painting.



How to make a SIZE for the Gilding both with GOLD and SILVER.

THE operation is thus for the making of gold size: take yellow oaker, and grind it on a stone with water till it be very fine, and afterwards lay it on a chalk stone to dry; this is the common way: or you may wash your oaker, for when it is washed, to be sure nothing but the purest of the colour will be used; and besides 'tis done with less daubing.

When your oil and oaker are thus prepared, you must grind them together, as you do other oil colours, only with fat drying oil, but it is somewhat more laborious, and must be ground very fine, even as oil itself: for the finer it is the greater lustre will your gold carry that is laid on it.

Here note, that you must give it such quantity of your fat oil, that it may not be so weak as to run when you have laid it on; nor so stiff that it may not work well; but of such a competent body, that after it is laid on, it may settle itself smooth and glossy, which is a chief property of good size.

Silver size is made by grinding white lead with fat drying oil, some adding a little verdigrease to make it bind.

The practice of working oil colours, and painting timber-work, after the manner of common painting.

THAT which I here call common painting is only the way and manner of colouring all manner of wainscots, doors, windows, posts, rails, pails, gates, border boards for gardens, or any other materials that require either beauty or preservation from the violence of rain, or injury of weather; the method of doing which, I shall lay down as plain as I can. Suppose then, that there be a set of palisadoes, or a pair of gates, or some posts and rails to paint, and I would finish them in a stone colour: first look over the work, and take notice whether the joints be open in the gates, or whether there be any large clefts in the posts, for if these are not secured the wet will insinuate itself into those defects, and make the quicker dispatch in ruining the whole work; let the first business therefore be, to stop up these places smooth and even, with a putty made of whitening and linseed oil, well beaten together on the grinding stone, with a wooden mallet, to the consistence of a very stiff daw, and with this let all the crannies, clefts and other defects be perfectly filled up, that it may be equal to the surface of the stuff; then proceed to the priming of the work with some Spanish Brown well ground and mixt very thin with linseed oil; with this do over the work, giving it as much oil as it will drink up; this in about two days will be indifferent dry, then if you would do the work substantially, do it over again with the same priming colour; when this is thorough dry, then take the white lead well ground and tempered up, not too thin, for the stiffer you work it, the better body will be laid on; and the thicker coat of colour that your timber is covered withal, the longer it will last; let this colour be well rubbed on, and the whole surface of the work be so intirely covered, that there remain no crack nor corner bare, which you may easily do by jobbing in the point of a bristle brush: let the first colouring dry, and then go over it a second time, and if you please a third also; the charge will be a little more, but the advantage will be much more great.

This course is sufficient for any kind of timber work that requires only a plain colour; whether you thus cover the work with a stone colour, or else with a timber colour in umber and white, or a lead colour in indigo and white, that with white being the cheapest of the three by much; nay, I have known some lay over their work only with a coat of Spanish brown, by tempering it up more stiff than was done for the first, two primings, which in some respects is cheapest of all, and preserves the timber perhaps as well as any. Now he that is able to bring the work thus far on has proceeded to the highest pitch of that common painting that aims at preservation beyond beauty, though something of beauty is necessarily included in this also; but this is not all, for he that is arrived thus far, is in a fair way to other perfections in the art of painting: but for the panneling of wainscot with its proper shadows, and for imitating olive and walnut wood, marble and such like; these must be attained by ocular inspection, it being impossible to deliver the manner of the operation by precept without example, and I am bold to affirm, that a man shall gain more knowledge by one day's experience than by a hundred spent to acquire it in some other way.

I advise therefore all those that desire any insight into this business, to be a little curious, if opportunity offers, in observing the manner of a painter's working, not only in grinding his colours, but also in laying them on, and working them in; in all these observing the motion of his hand, in managing of any kind of tool, and by this means, with a little imitation, joined to the directions here given; I doubt not but in a short time you may arrive to great proficiency in the business of common painting.

Note, That if when you have made use of your colours, there be occasion of a small cessation till the work be finished; in this case 'tis best to cover the colour in your pot with water, for that will prevent their drying, even in the hottest time.

And for your pencils they ought, so soon as you have done working, to be well washed out in clean lintseed-oil and then in warm soap suds; for if either oil or

colours be once dried in the brush or pencil, 'tis spoiled for ever.

It has been observed, that timber laid over with white, when it has stood some time in the weather, the colour will crack and shrink up together, just as pitch does, if laid on any thing that stands in the sun; the cause of this is, that the colour was not laid on with a stiff body, able to bind itself on firm and fast.

If you shall at any time have occasion to use either brushes that are very small, or pencils, as in many cases there will be occasion, you ought then to dispose of the colours you use upon a pallet (which is a wooden instrument, easy to be had at any colour-shop) and there work and temper them about with your pencil, that the pencil may carry away the more colour; for you are to note, that if a pencil be only dipt into a pot of colour, it brings out no more with it than what hangs on the out side, and that will work but a little way, whereas if you rub the pencil about in the colour, on the pallet, a good quantity of colour will be taken up in the body of the pencil; and besides all this, you may work your pencil better to a point on a pallet, than you can do in a pot; the point of a pencil being of greatest use in divers cases, especially in drawing of lines and all kind of flourishing.

What COLOURS are most suitable, and set off best one with another.

By setting off best, I mean their making each other look most pleasant, for two of some particular colours put together, or one next the other, shall add much to the beauty of each other, as blue and gold, red and white, and such like; but green and black put together, look not so pleasant, neither do black and timber, or raw colour, and such like.

All yellow then set off best with blacks, with blues, and with reds.

All blues set off best with whites and yellows.

Greens set off well with blacks and whites.

Whites set off well enough with any colour.

Reds set off best with yellows, whites and blacks.

Gold looks well upon a white ground, especially if the manner to be gilt be craved.

Gold and black shew also very well.

Gold on timber colour shews also very well.

So does gold and a horseflesh colour, made with the brightest Spanish brown.

But the most glorious ground of all others for gold are the vermillion red, the smalt blue, and the lake, laid on a light ground.

Of some colours that arise from mixture.

Ash-colour is made of white lead and lam black; if a deep ash colour, then take the more black, but if a light one, then take but little black, and most white.

A lead colour is made of indigo and white.

A colour resembling new oaken timber, is made of umber and white lead.

A flesh-colour is compounded of lake, white lead, and a little vermillion.

A buff colour, take yellow oaker, and white lead.

For a willow green, take verdigrease alone.

For a light willow green, take verdigrease and white.

For a grass-green, take verdigrease and pink.

A carnation is made of lake and white.

Orange-colour, yellow oaker and red lead.

A light timber colour, mix spruce oaker, and white and a little umber.

Brick-colour, red-lead, a little white and yellow-oaker.

For a gray-colour, take white and a little yellow-oaker.

Olive wood is imitated with oaker, and a little white, mixed over with burnt umber.

Walnut tree is imitated with burnt umber, and white, mixed over with the same colour alone, and in the deepest places with black.

Pails and posts, are sometimes laid over wholly with white, which they call a stone colour.

Sometimes posts and rails are laid over with indigo and white, which is called a lead colour.

Window frames are laid in white, if the building be new, but if not then they generally are laid in lead colour, or indigo and white, and the bars with red lead.

Doors and gates, if painted in pannels then the shadow of a white ground are amber and white, but if laid in a lead colour, then the shadows are lifted with black.

'Tis not possible to set down all those varieties of colours that may be produced by mixture; they that would see more, may peruse Dr. Salmon's polygraphice, where they shall find great variety. But those which I here have given an account of, are sufficient for common painting.

A lead colour is made of white lead and black.

How to gild with GOLD on an oily Size, either Letters or Figures, &c.

WHATSOEVER you would gild must first be drawn with gold size (the making of which has been mentioned) according to the true proportion of what you would have gilt, whether figure, letter, or whatever else it be; when you have thus drawn the true proportion of what you would have gilt, let it remain till it be sufficiently dry to gild upon, which you shall know by touching it with the end of your finger; for if your finger stick a little to it, and yet the colour come not off, then it is dry enough; but if the colour come off on your finger, then it is not dry enough, and must be let alone longer; for if you should then lay your gold on, it would so drown it, that it would be worth nothing; but if your size should be so dry as not to hold your finger as it were to it, then it is too dry, and the gold will not take; for which there is no remedy but new sizing; therefore you must watch the true time that it be not too wet or too dry; both extremes being not at all convenient.

When your size is ready for gilding, take your book of leaf gold and opening a leaf of it, take it out with your cane plyers, and lay it on your gilding cushion, and if it lie not smooth, blow on it with your breath, which

will lay it flat and plain, then with a knife of cane, or for want of it, an ordinary pocket knife, that hath a smooth and sharp edge; with this being wiped very dry on your sleeve that the gold stick not to it, let your leaf-gold be cut into such pieces, or forms, as your judgment shall think most suitable to your work.

When you have thus cut your gold into convenient forms, then take your gilding pallet, ('tis a flat piece of wood, about three inches long, and an inch broad, upon which is to be glewed a piece of fine woollen cloth of the same length and breadth) and breathe upon it to make it dampish, that the gold may stick to it; with this tool take your gold up (by clapping it down on the several pieces you had before cut into forms) and transfer it to your size, upon which clap it down according to discretion, and your gold will leave your tool, and cleave to your size; which you must afterwards press down smooth with a bunch of cotton, or a hare's foot; and this you must do piece by piece till you have covered all your size with gold; and after it is fully dried, then with your hare's foot brush off the loose gold, so will your gilding remain fair and beautiful.

If your work to be gilt be very large, open your book of leaf-gold, and lay the leaf down on your work without cutting of it in pieces, and so do leaf by leaf till you have covered quite over what you intend to gild: and if some particular places should miss there, take up with a small bunch of cotton a piece of leaf-gold, cut to a fit size, and clap it on, that the work may be entirely covered; and if the gold be to be laid in the hollows of carved work, you must take it up on the point of a camel hair pencil, and convey it in, and with the said pencil dab it till it lye close and smooth.

How to Gild with SILVER.

In laying on silver upon an oily size, the same method in all respects is required as for gilding with gold; only in this, that the size upon which silver is laid

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ought to be compounded of a very little yellow oaker, and much white lead; for the size being of a light colour, the silver laid on it will look more natural, and retain its own colour better, the whiter the size is.

Note. That the common painters do now generally in gilding use more silver than gold, in most works that are not much exposed to the air, to which they afterwards give the colour of gold, by means of the lacker-varnish, whose use is now so common, that if they gild any thing that stands free from the weather, they only gild with silver, and so give it the colour of gold with a lacker-varnish, made of gum-lack, dissolved in spirit of wine and laid over it.

Some DIRECTIONS for mixing of Oil Colours for divers Purposes, in the Art of Colouring Prints with Oil Colours.

Colours for several Faces.

FOR faces that are accounted fair, take white lead, a little vermilion and a very small touch of lake.

For the lips take more of the vermilion and lake than you did for the face.

For a brown face, take burnt oaker and white.

For a tawny Moor, take cullens earth, a little burnt oaker, and a little white.

Colours for Hair.

For a brown hair, mix umber and a little black and white.

For a yellow hair, take stone oaker, white lead and little vermilion.

For flaxen hair, take white lead, stone oaker, and little cullens earth.

Linnen is done with white lead and ceruse.

Silver is done with white, a little smalt, and for white masticote.

Gold is done with red orpiment and white masticote of each an equal quantity.

Colours for Garments.

For blue garments the best smalt and white lead.
For a grass green, mix verdigrease and a little pink-yellow.

For a willow green, mix verdigrease and a very little white.

A sea green is made by mixing green verditer, pink, and white lead.

A French green is made by mixing pink and indigo.

A carnation by mixing lake and white lead.

A crimson is made by mixing vermilion, lake and white.

A scarlet is only vermilion laid on alone.

A cherry colour is made by mixing vermilion and white lead.

For yellow, lay on either yellow orpiment, or yellow masticote; if your yellows are more pale, then mix white with the former.

For an orange colour, mix red orpiment and a little vermilion.

For a purple, mix smalt, lake and white.

For a violet, mix bice and lake.

A straw colour is made with white and yellow-oaker, and a very little umber.

An ash colour is made by mixing black and white.

A chestnut colour is made by mixing umber, lake and white.

A dove colour, or the wings of an angel, take white, a little lake, and a little smalt.

Colours for Trees.

For the bodies of trees, take yellow pink, white lead, yellow oaker, and a little black.

For the leaves of them that are near the eye, take verdigrease and pink, or if darker coloured, then take indigo and pink.

For leaves of trees farther off, take green verditer, pink, and white lead.

For them that are farthest of all, take terra-verd and white.

Colours for Grounds behind a Picture.

Note, That a light hair requires a dark ground; and a dark hair a light ground.

Ground colour for a picture with a light hair is made with umber, white and black.

A good colour for a dark hair is made with umber and white.

For Ground in a Landskip.

Take pink, oaker and white, with a little green verditer.

For country houses at a distance, take white lead, yellow oaker and smalt; the same colour serves also for houses of stone.

For brick-houses or walls, take yellow oaker burnt, and white lead, if the work be far off, but if near, then Indian red, and a little white.

For pails of wood or other timber work, of what kind soever, in country cottages, take umber, white, and a little oaker.

Sky colours,

Are made of smalt and white for the highest skies, more white for the lower, and yellow mixt with a little vermilion for the lowest of all.

The whole Art and Mystery of colouring Maps, and other Prints in Water-Colours.

HAVING, as yet, seen nothing published upon this subject that is authentick, I have thought fit, for the sake of those that are inclined to ingenuity, to set forth the way and manner of doing this work, it being an excellent recreation for those gentry, and others, who delight in the knowledge of maps; which by being coloured, and the several divisions distinguished one from the other, by colours of different kinds, do give a better idea of the countries they describe, than they can possibly do uncoloured.

Now to perform this work after the best manner, there must be provided in the first place a lye made with tartar and gum water.

To make the tartar lye, do thus, take two ounces of the best white tartar, which is a stony substance that sticks to the side of the wine vessels, and is sold by the druggists. Wrap it up hard and tight in half a sheet of brown cap-paper, wet it thoroughly in water, and put it into a clear fire either of wood or sea coal; let it remain therein till it be red hot quite through, then take it out with a pair of tongs, and put it immediately into a pint of water, and with your fingers rub it well to pieces; put it into a long narrow glass, and in a day or two the black will all settle, and the lye will become pure and clean: pour off the lye into a clean glass, and keep it close stopp'd for use.

To make gum water, take three ounces of the whitest and clearest gum arabick, which is also sold at the druggists, and beat it as small as you can bruise it; then put it into a pint of fair spring water, and let it dissolve therein, which will be much hastened by shaking the glass three or four times a day very well; that the gum that is dissolved may mix the better with the water that is above it; and when it is all dissolved, if there appear any foulness in it, strain it through a rag into a clean earthen dish, and put it into a glass, and stop it up for use. Note, That too much of this ought not to be made at a time: for if the gum be kept dissolved too long in the water, it will rot, and so be of no use; therefore observe to make it fresh once in two months, or three at the farthest.

In the next place, you must prepare or make your colours ready for use, and the best for this work are those that follow; Namely,

Copper green, and that is made thus; take a pound of bright French verdigrease made at Montpellier, this being the best, for the verdigrease made at any other places will fade. To this add three ounces of cream of tartar, beat them both into a fine powder, and take care, while the verdigrease is in the pounding, to stop your nose, and hold a bunch of fine linnen in your mouth to breathe through, else the subtle powder of the verdigrease will get up to offend; and when this is done, mix both the powders into two quarts of water, and boil it in an earthen pipkin till it boil away a quart, then strain it out when cold, and put the liquor into a glass, stop it up,

and let it stand to settle till the liquor be very clear, so you will have a delicate green; but sometimes the verdigrease not being always of a goodness, the colour may not be deep enough for some uses. In this case, put some of it into a broad earthen dish, and set it over a chaffing dish of coals, and by a gentle heat, diminish so much of the liquor till by trying on a paper, and letting of it dry, the colour please you; and here you are to note, That if it shine too much when dry, it is not right: for it is not rightly made except it but just shine, and if you cannot make the colour deep enough by evaporating by heat, the abounding liquid, without making it shine too much, it were better to add some more verdigrease, and boil it up a-new till it become a transparent deep willow green. If you would make but a pint of this, you must take but half the quantities of each; and you are also to take notice, that this is a colour that will keep many years without decaying, if the glass that contains it be close shut up.

The next colour needful to be made, is a stone colour, or a liquor of myrrh, which is thus done; take a pint of your tartar lye, and add it to an ounce of the best myrrh in powder, which you can get at the druggists, and boil it till the myrrh is dissolved, which will be done in a small time; let it settle, and pour off the clear for use, which you must keep close stopp'd up; this is also a tincture that will never decay, and may be made fainter or deeper by boiling more of the liquor away to make it deeper, or by adding water to it to make it fainter.

And in the last place, there is required a crimson colour which is speedily made thus: Buy at the druggists some good cochineal, about half an ounce will go a great way. Take thirty or forty grains, bruise them in a galley-pot to fine powder, then put to them as many drops of the tartar lye as will just wet it, and make it give forth its colour; and immediately add to it half a spoonful of water, or more if the colour be yet too deep, and you will have a delicate purple liquor or tincture. Then take a bit of allum, and with a knife scrape very finely a very little of it into the tincture, and this

will take away the purple colour, and make it a delicate crimson. Strain it through a fine cloth into a fine gallery-pot, and use it as soon as you can, for this is a colour that always looks most noble when soon made use of, for it will decay if it stand long.

Indigo is another colour used in colouring maps.

This is bought at the colour shops that sell paint, and it must be ground very fine on a stone, as you do oil colours, with a little tartar lye to make it give its colour, and look the brighter, when 'tis ground perfect fine like a thick syrup, add gum water to it till it be thin enough for your purpose, and keep it in a glass close stopp'd up, but it will settle so, that when you use it you must stir it up from the bottom.

For a yellow, gumboge is the best, it is sold at the druggists in lumps, and the way to make it fit for use is to make a little hole with a knife in a lump, and put into the hole some water, stir it well with a pencil till the water be either a faint or a deeper yellow, as your occasion requires, then pour it into a gallery-pot, and temper up more, till you have enough for your purpose.

Red lead is also a colour much used in this work, and so is orpiment; both which you may buy at the colour shops very finely ground, so that they need only to be tempered with gum water to be fit for use.

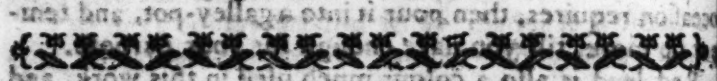
Blue bice is also used often, which needs only to be tempered with gum water, and when men design to be curious, they may use instead thereof ultramarine, which is the best and most glorious of all blues, but vastly dear; yet small papers of it about two shillings price may be bought at some colour shops, which if carefully used, will go a great way; it needs only to be tempered in a very small gallery-pot, with some gum water, till it lie on the paper a good colour.

There is likewise an exceeding glorious red or crimson colour, named carmine, which is exceeding dear, yet about half a crown's worth will go a great way in the uses to which it is put; it is tempered with gum water, and gives several degrees of colour according as it is thicker or thinner tempered.

Vermilion is also used in some cases. This is a glorious scarlet, and needs only be tempered with gum water, for it may be bought very finely ground in powder at the colour shops; only it is to be noted, that this colour shews much brighter when dry, if glazed over with some thick gum water, which is made by putting two ounces of gum arabick to half a pint of water, or less, if as good a no bad gum be used.

And for some uses, burnt lumber, ground very fine with water as thick as possible, and then tempered up with gum water to a due thickness, makes a good transparent colour.

There is another colour needful in this work, which is a most pleasant grass green, and that is made thus, take a lump of gumboge, and make a hole in it, then put therein some copper green; stir it about with a pencil, and from a willow you will see it turn to a grass green, which you may make deeper or lighter as you stir it about a longer or lesser time.



Of the Practice of Colouring Maps.

THE colours being prepared as before is directed, the only way to colour maps well, is by a pattern done by some workman, of which the Dutch are esteemed the best; three or four such maps coloured by a good artist, are sufficient to guide a man in the right doing of his work; but if he cannot obtain this, he may by a few trials grow a good artist in a short time, for this is only attained to by practice, and if a man spoil half a score maps in order to get the knack of colouring a map well at last, there's no man that is ingenious will grumble at it.

The art of colouring right may be attained by practice, as was said, but the hardest thing is to know rightly how to make and prepare the colours properly, without suffering them to sink into it; all that are here mentioned will lie fair and pleasant to the eye, and it is the fairness of the colour is most esteemed in this art of map-

painting; but if the paper be not good and strong, no art can make the colours lye well; therefore in buying maps, chuse those that are printed on the thickest or strongest paper.

DIRECTIONS how to lay on METZOTINTO- PRINTS on GLASS.

In undertaking this, curiously lay the prints flatways in warm water, of the thinnest and finest paper, for that which is rough and thick will not do near so well, at all; let them soak well, and your glass being very white and thin, go over it with Venice turpentine spread thin with a thin pliable knife, and daub it over with your finger, that the turpentine may seem rough.

This done, take the soaked print, and lay it on a clean cloth smooth, then press with another to take out the water, then lay it on the glass, the print next it, beginning at one end stroaking outwards the place already fixed on the glass, that neither wind nor water may be retained between to wrinkle it; then with a bit of a sponge, or your hand, wet the backside, and lightly by degrees roll off the paper carefully, without making holes, especially in the lights, which are the tenderest, and when the print appears very plain on the backside, let it dry about two hours, then varnish it over with turpentine or mastick varnish till you can see through it, and a night's drying will prepare it to be worked on with colours.

If you would have all the paper off, so that nothing but the print may remain, lay it as before with oil of mastick, and a little turpentine, and a brush will fetch off the paper.

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make the colour the well therefore in day



THE

Exports and Imports of G. Britain to and from foreign Nations.

To and from CHINA, INDIA and PERSIA.

EXPORTS. Great quantities of bullion, lead, all sorts of English cloth, especially broad cloth, stuffs, callimancoes, long cills, and some other goods, which are the product or manufacture of this kingdom.

IMPORTS. China ware, tea of all sorts, cabinets, raw and wrought silks, musling, callicoos, cotton cloths, coffee, wines, diamonds, drugs of many kinds, grocer wares of various sorts, and many other sorts of goods. Of which Mr. Gee supposes as much re-exported to foreign nations, as repays all the bullion carried to these places, and a considerable balance besides.

To and from AFRICA.

EXPORTS. Linnen and woollen manufactures, knives, scissars, small looking glasses, strong waters, pewter dishes, beads and other toys.

IMPORTS. Gold dust, red wood, elephants teeth, Guiney grain, gum, ostrich feathers, amber, ebony, crystal, and great numbers of negroes carried to the plantations of America. From the coast of Barbary we have rice, figs, almonds, raisins, dates and copper. The great advantage of the African trade is, that it carries no money out, supplies our plantations with negroes, and brings in a great deal of bullion for negroes sold in the Spanish West Indies.

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Exports and Imports of Great Britain. 335

To and from the CANARY ISLANDS.

EXPORTS. Bays, kerseys, ferges. Norwich stuffs, and other common manufactures, stockings, hats, fustians, haberdashery wares, tin, hard ware, also herrings, pilchards, salted fish, grain, linnen, pipe-staves, hoops, and some other commodities.

IMPORTS. Canary wines, logwood, hides, indigo, cochineal, and some few commodities which are the product of the West Indies.

To and from TURKEY.

EXPORTS. Broad cloths, long ells, tin, lead, some iron, some French and Lisbon sugars, and some bullion.

IMPORTS. Raw silk, grogram, yarn, dying stuffs, drugs, soap, leather, cotton, oil, some fruit, as currans, raisins, vitriol, sulphur, opium, galls, balm, box-wood, mohair. The balance of this trade is thought to be in our favour.

To and from ITALY.

EXPORTS. Broad cloth, long ells, bays, druggets, callimancoes, camblets, and other stuffs, leather, tin, lead, fish, as pilchards, herrings, salmon, Newfoundland cod, ling, logwood, &c.

IMPORTS. Raw, thrown and wrought silks, wine, oil, soap, olives, some dyers wares, anchovies, brimstone, carpets, scented gloves, necklaces, and some other things. The balance of this trade is thought to be considerably against us.

To and from SPAIN.

EXPORTS. Broad cloth, druggets, callimancoes, bays, stuffs of divers kinds, leather, fish, tin, lead, linen, corn, &c.

IMPORTS. Wine, oil, fruit of divers kinds, wool, indigo, cochineal, and dying stuffs, tea, &c. The balance is supposed but very small in our favour.

To and from PORTUGAL.

EXPORTS. Broad cloth, druggets, bays, long ells, callimancoes, perpets, says, kerseys, flannel, and all sorts

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of stuffs, also tin, lead, leather, fish, corn, and other things.

IMPORTS. Wine, oil, salt and fruits, as oranges, lemons, almonds, also figs, saffron, soap, white marble, liquorish, shumack. There is a considerable balance in our favour,

To and from FRANCE.

EXPORTS. Tobacco, horn-plates, tin, some lead, some flannels, corn in time of scarcity, wool, coals and allum.

IMPORTS. Wine, brandy, linnen, fine lace, fine cambricks, cambrick lawns, brocades, velvets, salt, paper, prunes, chesnuts, &c. There is here a balance against us of no less than 500,000 *l.* per annum.

To and from FLANDERS.

EXPORTS. Serges, a few flannels, a very few stuffs, Sugars, tobacco, tin and lead.

IMPORTS. Fine lace, fine cambrick and cambrick lawns, whited linnens, threads, tapes, incles, and diverse other commodities, to a very great value. The balance is very much against us, being at least 250,000 *l.* per annum.

To and from HOLLAND.

EXPORTS. Broad cloth, druggets, long ells, stuffs of a great many sorts, leather, corn, coals, tobacco, rice, ginger, pitch, tar, with East India and Turkey goods.

IMPORTS. Great quantities of fine hollands, thread, tapes, incles, whale fins, brass battery, madder, linte seed, flax, argol, wainscot, clapboard, paper, &c. The balance is considerably for us.

To and from GERMANY.

EXPORTS. Broad cloth, druggets, long ells, stuffs, serges, tobacco, sugar, ginger, tin, lead, East India goods, and several other commodities.

IMPORTS. Prodigious quantities of linnen, linnen yarn, kidskins, tin plates, and a great many other commodities. The balance is very near as much against us in this trade, as in that of France.

To and from DENMARK, SWEDEN, and NORWAY.

EXPORTS. Guineas, crown-pieces, bullion, some tobacco, a few coarse woollens, meal, malt, beef, tallow, salt, coal, some linnen, lead, butter and herrings.

IMPORTS. Deal boards, fir timber, spars, plank, iron and copper, wire of iron and copper, tar, wainscot, pipe staves, great guns, mortars, bullets. We pay them a very great balance, amounting to near 390,000 *l.* per annum.

To and from RUSSIA

EXPORTS. Some coarse cloth, long ells, worsted stuffs, tin, lead, tobacco, and a few other commodities.

IMPORTS. Hemp, flax, linnen cloth, linnen yarn, Russia leather, iron, furs, pot ashes, timber, train oil, tallow, &c. to an immense value. The balance is against us here 400,000 *l.* per ann.

To and from NEW ENGLAND.

EXPORTS. All sorts of woollen manufactures, linnen, sail cloth, and cordage for rigging their ships, haberdashery, hard ware, &c.

IMPORTS. Pitch, tar, and turpentine, with some skins, pipe staves, masts, pine, cedar, &c.

To and from NEW - JERSEY, NEW-YORK and PENNSILVANIA.

EXPORTS. Broad cloth, kerseys, druggets, serges, and manufactures of all kinds.

IMPORTS. Gold and silver, with some small quantity of wheat, flax, and hemp.

To and from VIRGINIA and MARYLAND.

EXPORTS. All manner of cloathing and household goods, iron manufactures of all sorts, saddles, bridles, nails and copper wares, and in short a part of all our manufactures.

IMPORTS. Tobacco, both for home consumption and re-exportation, tar, pitch, turpentine, and some lumber.

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To and from CAROLINA.

EXPORTS. The same commodities as to Virginia, viz. cloths, and all sorts of manufactures.

IMPORTS. Rice, deer skins, buck skins, beaver, and some small quantity of raw silk and tobacco.

To and from the SUGAR PLANTATIONS.

EXPORTS. Cloathing of all kinds, both linnen, silk, and woollen, wrought iron, brass, copper, all sorts of household furniture, and a great part of their food.

IMPORTS. Sugar, ginger, rum, molasses, cotton, indigo, cocoa nuts, pimento, tamarinds, lime-juice, some gold and bullion from Jamaica to the value of 539,500*l.* per ann. from Barbadoes, to the value of 246,600*l.* from the Leeward islands, viz. Antigua, St. Christopher's, Nevis, Montserrat, Barbuda, Anguilla, Spanish Town, Tortolo, and the rest of the Virgin islands, to the value of 642,270*l.*

To and from IRELAND.

EXPORTS. Beaver skins, and beaver wool, French indigo; beer, ale, and cyder; old and new drapery; salt, pitch, and tar; books, bark, bottles; silks, raw, thrown, and manufactured; cambrics, hollandes, lawes, muslins; cotton, silk, and thread stockings; worsted and silk ditto, and breeches; callicoets; silk, and hair shags; silk ribbon, cottons, mohair buttons, fustians, cheques, tapes, kentings; gold and silver thread and lace; bone lace, linscy-woolseys, camblets, millenary-wares; cheese, hoops, hops, chalk and whiting; dye stuffs, drugs, wrought plate, china ware, earthen ware, hard ware, tin-plates, block-tin, sugars, sugar-molds, teas, groceries, fruits and spices; Turkey coffee, liquorice, logwood, cochineal, seeds, scythe-stones, tobacco, malt, wheat and flour; hats, barley, looking-glass plates, drinking and other glasses; iron, steel, sheet lead; white, red, and black ditto; flax and flax seed; iron, and sheet ditto; mahogany, hogs-bristles, colours, battery and brass shruff; goats hair, Spanish and English wool, bees wax, copper plates, Pistachio nuts, almonds, rice, Turkey figs; wool cards, spaw water, bricks, the

nish wines; salt petre, mustard, red wood, cotton wool, buck and doe skins; pins, needles, crimins, Turkey cotton, elephants teeth, pewter, flints, toys, hats, ivory and horn combs; hollow sword blades, coals, flates, snuff.

IMPORTS. Linnens and linnen yarn; wool, woollen and worsted yarn; copper ore, beef, butter, pork, tallow; oats and oatmeal (to North Britain) rabbits for and skins; hides; kid, calf, goat, lamb. otter and fox skins; pelts, ox-horns, glew, usquebagh, feathers, quills, candles, soap, and some other inconsiderable articles.



A N

Alphabetical List of English Manufactures, with the best Markets for the purchase of them.

BAYS, double, single and minikin, are made at Colchester, Bocking, Braintree, Witham, Cogeshall, and some other towns in Essex and Manchester.

Blankets. In Oxfordshire and Wales.

Brass and copper, cast, viz. into statues, into battery, as pots, sauce-pots, kettles, &c. and afterwards hammered; black latten for clock work, jacks, &c. Foundry ware, as cannon, mortars, apothecaries mortars, bells, pipes, wheel and mill work, buttons, coach and upholsterers nails: wrought or hammered, clock-work, jack-work and mill-work, kitchen ware, clocks, and dials, monuments, plate brass, and toys: in and about London.

Broad cloth, mixed or medley cloths in Wiltshire, Somersetshire, Kent, Surrey, and Devonshire. Plain white cloths for dying, at Salisbury, Worcester, Cirenster, and all parts of Gloucestershire.

Caps, high crowned, for seamen, called Monmouth caps, at Bewdly in Worcesterhire.

China, at Bow in Middlesex, and at Worcester.

Coarse woollens, as rugs, chair coverings, pennillions half thick, duffies, &c. in Cumberland, Westmoreland, and Lancashire.

Cottons, in Westmoreland, and Lancashire.

Dozens, or narrow woollen cloth mixed, at Leeds, Wakefield, Bradford and Hathersfield in the West riding of Yorkshire.

Druggets, in Wilts, Somersetshire and Berkshire.

Duroys, in the same places.

Flannels, Salisbury, Shrewsbury, and Wrexham in Wales.

Frizes, at Worcester, and in Ireland.

Fustians, at Bolton, Manchester, and parts adjacent.

Glass, fine flint, including all sorts of drinking glasses, cruets, phials, retorts, case bottles, decanters, sconces, branches, toys, watch-glasses, tubes and optic glasses, at London, Bristol, Stourbridge, Nottingham, Sheffield, Newcastle.

— Looking glasses, coach glasses and sashes, at London.

— Crown glass for windows, ordinary sashes, pictures, and ordinary quarrel glass, at London, Bristol, Stourbridge and Newcastle.

Green glass, for bottles, phials, retorts and melons, at London, Bristol, Leith, Gloucester, Stourbridge, and Newcastle.

Hats, felts at Leicester, and Warwick. Castors in Derby. Bevers in London.

Iron, cast into guns, shells, cylinders, cannon, small arms, bombs, hand granadoes, chimney backs, pots, waterpipes, furnaces, plates and bars, and retorts, at Coalbrookdale, Shropshire, and at Crowley's iron manufactories in Greenwich and Newcastle.

— Forged edge tools, knives, and scissars, cutlery ware and toys, nails, hinges, hooks, spikes, cocks, keys, razors, surgeons instruments, and clothiers and other sheers, at London, Birmingham, and Sheffield.

— Hammered, chains, anchors, crows, tires, ballistres, rails, espaliers, palisadoes, gratings, bar iron, and screws, at London and Newcastle.

—Milled hoops and all split and flatted iron, springs for clocks and watches, London.

Kerseyes, or coarse cloths, Bradford, Halifax, Rochdale, Guildford, and the circumjacent country.

—Devonshire kerseys, in Devon and Somersetshire.

Lead, Pigs and sows for exportation; sheet lead, milled or cast for covering buildings, sheathing ships, coffins, basins or fountains.

—Cast lead, for statues and pipes, bullets, small shot, moulds, letharge, calcined lead, &c. at London and Newcastle.

Linscy woolsey, for hangings, Kidderminster and Worcester.

Long ells, or perpers, at Tiverton, Sudbury and Colchester.

Manchester ware at Manchester.

Narrow woollens. See dozens.

Perpers. See long ells.

Plaidings, at Coventry and in Scotland.

Sackings, at Wantage and Newbery, Berks.

Says at Sudbury.

Serges, in Wilts, Somersetshire and Berkshire.

Shalloons, Northamptonshire, West Riding of Yorkshire, Berkshire, Somersetshire, Wiltshire, Hampshire, Carlisle, Edinburgh, Stirling and Moffelburgh.

Silks of various sorts, in Spittlefields.

Stockings, woven, Nottinghamshire, Leicestershire, Derbyshire, Warwickshire and Spittlefields.

—Knit yarn, in Gloucestershire, Yorkshire, Worcesterhire, Derbyshire, Northampton, Kendal and Aberdeen.

Stuffs, Norwich, Spittlefields, Bristol and Darlington.

Tammies, or Coventry ware, at Coventry.

Tapestry, at Fulham in Middlesex.

Tin, blocks for exporting, pewter molds and folder, London.

Velvets, in Spittlefields, and a fort at Manchester.

Perhaps it may not be amiss to add, that butter in firkins is the produce of Suffolk, Yorkshire, Durham, Cumberland and Northumberland; cheese of Cheshire, Wilt-

shire, Warwickshire, Gloucestershire, and Suffolk; red herrings come from Yarmouth; coals from Northumberland, Durham and Bristol; malt from Herefordshire, Essex, Bucks, Kent, Oxford and Berks; salmon from Berwick.



A TABLE, shewing the Value of Portugal Pieces, in Pounds, Shillings, and Pence, Sterling.

PORTUGAL PIECES.

Numb. of Pieces.	at			at			at			at		
	l.	s.	d.	l.	s.	d.	l.	s.	d.	l.	s.	d.
1	3	12	0	1	16	0	0	18	0	1	7	0
2	7	4	0	3	12	0	1	16	0	2	14	0
3	10	16	0	5	8	0	2	14	0	4	1	0
4	14	8	0	7	4	0	3	12	0	5	8	0
5	18	0	0	9	0	0	4	10	0	6	15	0
6	21	12	0	10	12	0	5	8	0	8	2	0
7	25	4	0	12	16	0	6	6	0	9	9	0
8	28	16	0	14	8	0	7	4	0	10	16	0
9	32	8	0	16	4	0	8	2	0	12	3	0
10	36	0	0	18	0	0	9	0	0	13	10	0
20	72	0	0	36	0	0	18	0	0	27	0	0
30	108	0	0	54	0	0	27	0	0	40	10	0
40	144	0	0	72	0	0	36	0	0	54	0	0
50	180	0	0	90	0	0	45	0	0	67	10	0
60	216	0	0	108	0	0	54	0	0	81	0	0
70	252	0	0	126	0	0	63	0	0	94	10	0
80	288	0	0	144	0	0	72	0	0	108	0	0
90	324	0	0	162	0	0	81	0	0	121	0	0
100	360	0	0	180	0	0	90	0	0	135	0	0

Note, The bank of England nor stamp office take no pieces of gold that want above 6 grains in weight.

Tables of the Value of Gold Coin.

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A TABLE, shewing the Value of Pistoles and Louis d'Ors, in pounds, shillings and pence.

A TABLE, shewing what each of the following Pieces should weigh; likewise the Value of Gold and Silver per ounce, penny wt. &c.

Louis d' Ors, at		Pistoles at		Coins.	Value		Weight at 3/18s per oz.				
l.	s.	l.	s.		l.	s.	pwt.	gr.			
1	4	0	16	06	A Portugal Piece	3	12	0	18	11	$\frac{1}{8}$
2	8	1	13	00	Half ditto	1	16	0	9	5	$\frac{1}{2}$
3	12	2	09	06	Quarter ditto	0	18	0	4	14	$\frac{1}{4}$
4	16	3	06	00	Eighth ditto	0	9	0	2	7	$\frac{1}{8}$
6	0	4	02	06	Sixteenth ditto	0	4	6	1	3	$\frac{1}{16}$
				A Moidore	1	7	0	6	22	$\frac{1}{2}$	0
7	4	4	19	00	Half ditto	0	13	6	3	11	$\frac{1}{2}$
8	8	5	15	06	Quarter ditto	0	6	9	1	17	$\frac{1}{4}$
9	12	6	12	00	A Guinea	1	1	0	5	16	$\frac{1}{8}$
10	16	7	8	06	Half ditto	0	10	6	2	16	$\frac{1}{2}$
12	0	8	5	00	Louis d'Ors	1	4	6	6	6	0
				Half ditto	0	12	0	3	3	3	0
24	00	16	10	00	Value of Gold.						
36	00	24	15	00							
48	00	33	00	00							
60	00	41	05	00							
72	00	49	10	00							
				1 Pound is worth	48 6 0						
				1 Ounce	4 0 0						
				1 Penny weight	0 4 0						
				1 Grain	0 0 2						
84	00	57	15	00	Value of Silver.						
96	00	66	00	00							
108	00	74	05	00							
120	00	82	10	00							
				1 Pound is worth	3 0 0						
				1 Ounce	0 5 0						
				1 Penny weight	0 0 3						
				1 Grain	0 0 0						

A TABLE of the two great roads from EDINBURGH to LONDON.

Stages	Miles			Tp Stages	Miles		
Haddington	16	16	2	Lintown	16	16	
Dunbar	13	29	2	Beild	16	32	
Old Cambus	12	41	2	Moffat	17	49	
Berwick	16	57	2	Lockerby	15	64	
Belford	16	73	2	Allifon Bank	14	78	
Alnwick	14	87	2	Carlisle	12	90	
Morpeth	19	106	2	Penrith	19	109	
Newcastle	14	120	0	Kendal	15	124	
Darham	15	135	2	Burton	12	146	
Darlington	18	153	2	Lancaster	11	157	
North-Allerton	16	169	3	Garstang	9	166	
Burrough Bridge*	19	188	2	Preston	14	180	
Weatherby	12	200	1	Wigan	16	196	
Ferry-Bridge	16	216	2	Newton	8	204	
Doncaster	15	231	2	Lestock	16	220	
Bawtry	18	239	0	Newcastle under L	21	241	
Tuxford	16	255	0	Stone	8	249	
Newark	13	268	2	Litchfield	27	276	
Grantham	14	282	2	Coles Hill	11	287	
Stamford	10	302	2	Coventry	13	300	
Stilton	24	316	2	Dunstable	9	309	
Bugdon	14	330	1	Towcester	19	328	
Biggleswade	16	346	5	Stoney Stratford	10	338	
Stevenage	14	360	0	Dunstable	19	357	
Hatfield	12	372	1	Sr. Albans	13	370	
Barbet	19	381	1	Barbet	9	379	
LONDON	11	392	3	LONDON	11	390	

* York is 17 miles off this place and 9 miles about from the direct road.

N. B. Tp stands for turnpike, and the figures below, what is paid at each.



English Spelling Dictionary.

A B R

A C C

A D M

A Bandon	abridgment	accountant
abase	abroad	accoutrement
abatement	abrupt	accumulation
abashment	abcess	accuracy
abate	abscond	accursed
abatement	absence	accusation
abbacy	absolve	accuser
abbefs	absolute	acid
abbot	abstemiousness	acknowledgment
abbreviate	abstract	acquisition
abbreviation	abstraction	action
abbutals	abstruse	actor
abdicate	absurd	acute
abdication	abundance	adapt
abdomen	abuse	adder
abet	academy	addition
abettor	acceleration	address
abhor	accept	adequateness
abhorrence	acceptableness	adhere
abject	accessory	adjacent
abjection	accident	adieu
ability	accidentalness	adjoin
abduration	acclamation	adjournment
able	accommodate	adjure
abnegation	accommodation	admeasurement
aboard	accompaniment	administer
abolishment	accompany	administration
abominable	accomplice	administrators
abomination	accomplish	admirableness
abortion	accomplishment	admiralty
abound	accord	admire
abrenunciation	account	admit

A G I

A N A

A Z U

admonish	agility	ancestors
adopt	agitate	anchovy
adorable	agonize	animadversion
adornment	agreeableness	animacule
advancement	agreement	anniversary
advantages	agriculture	annoy
adventitious	agrimony	antichamber
adventure	aground	antimonarchical
adventurous	alabaster	antichristianism
adversary	albeit	antipodes
advertisement	alchymist	apocrypha
advice	alderman	apoplectic
adult	alegar	apparatus
adulteration	algebra	apparition
advocate	alien	applicable
advowson	aliment	archdeacon
affability	allegiance	archbishop
affair	allegorical	archetype
affectation	alleviate	argumentation
affection	alligation	armada
affectionate	alligator	arraignment
affectionateness	allowance	arrogance
affective	almanack	arrogate
affiance	Almighty	arsenal
affidavit	aloes	asparagus
affinity	alphabetically	aspiration
affirm	already	associate
affirmatively	alteration	assuage
affix	alternate	astonish
affluence	amain	astriction
afford	amass	astrologer
affranchise	amercement	astronomy
affray	amicableness	atrocious
affront	amusement	attribute
affusion	anabaptist	avail
aforehand	anagrammatist	avarice
aggrandise	analogy	auctioneer
aggravate	analysis	authority
aggravation	anarchy	axel-tree
aggression	anathema	azure
agile	anatomy	

Batche
backli
backw
backw
bagnip
bag-pip
bailiff
bailiwi
balance
balcony
baldero
baldne
bale
baleful
ballad
ballast
ballustr
Bambu
Bampt
Banbur
banditt
bandoli
pane-b
paneful
Bangor
banker
bankrup
Banstea
Barbad
Barbad
barbari
Barbar
barbed
arbel
arbles
arber
arbica
armor
armot
arnby

B A R

B E A

B E V

B

Barnesley

beauty

Batchelor

Barnet

beaux

backslide

Barnstaple

Beckernet

backward

barometer

Beckingham

backwardness

barrack

Beckles

bagnip

barricado

becomingness

bag-pipe

barrier

bedaggle

bailiff

barriſter

Bedall

bailiwick

Barstead

bedaub

balance

barter

Bedford

balcony

Barton

Bediford

balderdash

base

Bedlam

baldness

baſhful

beech

bale

baſil

Beelzebub

baleful

baſilisk

beefom

ballad

Baſingſtoke

beggary

ballaſt

Baſſa

belabour

balluſtrade

Baſſalecy

beldam

Bamburg

baſſet

beleaguer

Bampton

baſſoon

Belford

Banbury

baſſrelief

belfery

banditti

baſtile

Belgian

bandolier

baſtinade

Belgic

bane-berry

baſtion

bellow

baneful

baſtwick

belſwagger

Bangor

battoon

Beltingham

banker

battalia

belvidere

bankrupt

Bautre

Belvoir-castle

banſtead

bawdry

bemire

Barbadiſon

Bayborough

Bemiſter

Barbadoes

baynard

bergamot

barbarian

Beachley

Berlin

barbary

beacon

beſpeckle

barbed

Beaconsfield

beſprinkle

barbel

beadle

beſtridden

barbles

beadſman

Bethkelert

barber

beard

bethought

barbican

beaſt

Betley

barmore

beatific

betony

barbote

beau

betroth

barby

beaver

bevel

B L E

B O O S

B U A C

beverage	Blendor-hasset	bosses
Beverley	blindfold	Boston
Bewdloy	blinkard	botanical
bewildered	blithe	botcher
bewitch	blockade	botchingly
Bewmauris	blockhead	bought
Bicefter	bloodshed	bolting-mill
bidder	bloodshot	bounce
bigotism	blossom	boundary
bilander	blowze	bounteousness
bilboes	blunder	bowelled
Bildeston	bluntness	bowling-green
bilious	boaster	Bowtel
Billerichy	boatswain	boyish
billet-doux	bobtail	braggadocio
Billingsford	bodice	brainless
Billingham	boggle	brand-iron
binder	boggy	brandish
Bingham	boiler	brandling
biographer	boisterous	brandy
bird-call	boldness	Brasil
bird-lime	bolster	bravado
Birmingham	Bolton	brawler
bishoprick	bombardier	brawn
bissextile	bombast	brawniness
bittern	bombazine	breast-plate
bitumen	bondage	breeches
blabber	bonefire	breeding
Blackburn	bongrace	Brentford
blackmoor	bonnet	breviary
blackness	booby	brew-house
blacksmith	bookbinder	Brickhill
bladder	book-keeping	bride-groom
Blaize	bookseller	Bridewell
blameable	book-worm	brigade
Blandford	boorish	brigandine
blanket	bopeep	brigantine
blaspheme	bordage	Brokenhurst
blazon	borrower	browantler
bleak	boscage	brôw-beaten
bleat	Bosphorus	lucklessness

Italian Hand

a b c d e f f g h i j k l l m n o p q r s t u v w x y z

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

Riches are not for ever, & doth the
own endure to every generation

Engrossing

a b c d e f f g h i j k l m n o p q r s t u v w x y z

A B C D E F G H I J K L M N O P

Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

A B C D E F G H I J K L M N

O P Q R S T U V W X Y Z

Running Hand

not thy self because of evil men;
neither be thou envious.

Take the foolish and live and go in
the way of understanding

B
backtho
backwee
Bucolics
bud
Boddefd
buddle
bodge
budget
Bodwort
buff
buff-coat
buffle
buffoon
bug
bugdun
buggeren
bugger
bugle
bugle-ho
buglofs
bugld
buglder
buglding
buglt
buglb
buglbacen
buglbine
buglbous
buglfinch
buglge
buglkin
buglkinfs
buglky
bugll
bugllace
bugll-bait
bugll-begg
bugll
bugll-herd
bugllingbr
bugllion

B U L

B U R

B U T

buckthorn

buckweed

Bucolics

bud

Buddesdale

buddle

budge

budget

budworth

buff

buff-coat

buffle

buffoonery

bug

bugdon

buggerer

bugger

bugle

bugle-horn

bugloss

bug

bugler

bugling

bug

bug

bugbancency

bugbanc

bugbous

bugfinch

bugge

bugk

bugkincks

bugky

bug

buglace

bug-baiting

bug-beggar

buglet

bug-herd

buglingbrook

buglion

bullock

bully-rock

bul-rush

bulwark

bum

bumble

bump

bumpkin

bunch

bunchiness

bunchy

bun

bundle

bundle-wife

Bungaye

bung-hole

bungle

bungler

bunglingly

bunt

bunter

bunting

Buntingford

buoy

buoyant

buoying

bur

Burbich

burden

burdensome

burdensomeness

bureau

Burford

burgess

burgeship

burgh

Burghdere

burgher

burglar

burglary

burgmote

burgomaster

burial

burlesk

burling-iron

burley

burn

burnet

Burnham

burning

burning-glass

burning-iron

burnish

burnisher

Burnley

burnt

Burntwood

burr

burrel

burrow

Burrowbridge

burse

burser

burst

bursten

burstenness

Barton

Burtonferry

burt-wort

bury

bush

bushel

bushy

busily

business

buskin

bus

bust

bustard

bustle

busy

but

C A M	C A R	C A S
butcher	Campden	carbonade
butcherly	camphire	carbuncle
butchers-broom	campion	carcass
butchery	Canary-bird	cardamum
butler	cancer	Cardigan
butlerage	candidate	cardinal
butlership	candid	career
butt	Candlemas	careful
butter	candlestick	careless
butterfly	candour	Carew
butter-milk	Canibal	cargo
butter-teeth	canine	carlings
buttery	canker	Carlisle
buttock	Cannaston	Carlton
button	cannon	Carmarthen
buttreſs	canonical	Carmalite
Buxton	canonist	carmine
buy	canonization	carpal
buyer	canonship	Carnarvon
buz	canopy	carnation
buzzard	Canterbury	carnaval
by	cantharides	carnivorous
By-berry	Canticles	Carolina
by-ends	cantonize	carouſe
By-ford	canvaſs	carpet
by-lander	capacious	carpenter
by-lands	capaſee	carrear
by-laws	caper	carriage
by-place	capillary	carrier
by-way	capital	carriion
by-word	Capitol	cartel
C	capitulate	Cartefian
Calvinist	capon	Carthuſian
calumniate	caprice	cartilage
cambric	captain	Cartmel
Cambridge	captious	cartridge
cameleon	captive	caſcade
Camelford	capture	caſhier
camlet	capuchine	Caſhiope
camomile	carabineer	caſſock
campaign	caravan	caſtaway

Caſtle
Caſtle
caſtling
caſtrat
caſual
caſuall
caſuiſt
cataco
catalog
catarra
catapia
catara
cataſtr
catchp
cateche
categor
caterer
caterpi
cathart
Cathari
cathedr
catholic
Cats-aſ
Cateric
caterwa
cavalca
cavalier
cavalry
Caucle
caveate
caveer
cavern
caverno
cauldron
cauſtic
caution
caution
Caxton
Caxwol
celebrat
celerity

C B L

C H A

C H D

Castle-comb	cellarage	charitable
Castle-rising	cement	charmer
castling	censor	charnel house
castrate	centaur	chart
casual	centinel	charrel
casually	century	charter
casuist	cephalic	chaste
catacomb	Cerberus	chasten
catalogue	cere-cloth	Chatham
catarrh	ceremonial	chattles
cataplasim	certainty	chatter-pye
cataract	certificate	cheap
catastrophe	cessation	chequer'd
catchpole	chaffing-dish	check-bone
catechetical	chaife	cheer
categorical	chalcedony	cheese
caterer	Chaldee	Chelford
caterpillar	chaldron	Chellingford
cathartic	challenge	Chelmsford
Catharine	chamber	Cheltenham
cathedral	chambering	Chepslow
catholic	chamberlain	cherish
Cats-ash	chambermaid	Cherloury
Caterick	champaign	cherry-stone
caterwawling	champion	cherubin
cavalcade	chancellor	Cheham
cavalier	chance-medley	Chehunt
cavalry	chancery	Chetelhampton
Caucle	chandler	chevalier
caveate	change	Chewton-Mendip
caveer	channel	Chichester
cavern	chapelry	chicken
cavernous	chaplain	Chidingford
cauldron	chapman	chidingly
caustic	chaplet	chief
caution	Chapelborn	chiefstain
cautiously	character	chilblain
Caxton	charcoal	child-bearing
Caxwold	chargeable	Childermas
celebrate	Charing	Childham
celerity	chariot	chimerical

C O N

C R U

C Z A

comber	controversy	crumb
Comberton	contumely	crystal
combination	convent	cub
Combmerston	convulsion	cuckold
comedian	cook	cudgel
comfortable	copious	culmar
comical	coquet	culpable
comeliness	Corbridge	cultivation
commandment	cordial	cumberstone
commemoration	corner	cunning
commencement	coronation	cupboard
commensuration	corpulence	cur
commodiousness	corruption	curable
comparative	cosmography	curate
complaint	cottage	curb
complexion	cove	curdle
complement	counsellor	curiosity
comportment	courtship	curlew
comprehension	coward	currans
compression	coxcomb	curry
concealment	coy	curse
concise	cozen	curtain
conclusion	crab	curvet
concoction	crack	custody
concubine	cradle	custom
condemnation	craft	cut
confabulation	crag	cuz
confection	craggy	cycle
confirmation	crambo	cycloid
conformable	crane	Cyclops
congenial	crane	cygnet
conjecture	cravat	cylinder
conjunction	crawl	cymbal
connexion	crayon	cynic
conquer	crew	cynical
conscience	crimson	cyon
consignation	crocodile	cyphon
consubstantial	crookedness	cyprès
consumption	crowd	czar
contemplation	Croyden	czarefs
contradiction	crucifix	czarina

D E C

D E R

D I S

D	decipher	derogate
Dagon	decisive	description
dainties	declaimer	designation
Dalmatia	declaratively	desolation
Dalmatick	decoction	desperado
Dalton and Castle	decorate	despicable
damageable	decorum	despise
damnable	decrepid	despiteful
dampishness	Deddington	despond
Danby	dedicate	despotic
dandelion	dedication	detect
Dane-gelt	deducible	determine
dangerous	defamation	detestable
Darby	definition	dethrone
Darisbury	deformation	detractor
Darlington	degenerateness	diabetes
Dartford	delectation	diabolical
Dartmouth	delegate	diagnostic
Daventry	deliberation	dialling
St. Davids	delicacy	dialogue
daughter	deliciousness	diamond
dauntlessness	delightful	diametrical
Dauphin	delineate	dictator
dazzlingness	delineation	dictionary
deaconship	delinquent	Didmerton
Deal	delirious	Dieping-Market
deambulation	deliverer	difficult
deanship	demi-god	diffuse
death-watch	democracy	Digby
debauchee	Denton and Hall	digestion
debenture	denunciation	dilemma
debonairness	Denzil	diligence
Deborough	Dependale	dilucidate
Decameron	dependance	dimension
decampment	deplorable	diminution
deceitfulness	deposition	diocesan
deceiver	depravation	diploma
December	deprivative	direction
decemvirate	deputation	disadvantage
deception	Dercham	disagreeable
decimation	derivation	disappoint

disbar
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discip
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discrim
disdain
disenc
disfran
disgrac
dison
disinge
disloca
disloya
dismer
disobe
disobli
dispara
dispatc
dispen
displea
disposi
disprov
dispute
disquie
disrepu
disresp
diffatus
dissemb
dissenti
dissimu
dissolva
dissolut
disswad

D I S

D O R

D O U S

disband	distasteful	doteril
disburden	distemper	doubtful
discipline	distiller	Dove and Castle
discomfiture	distinction	doughtiness
discomode	Distington	Doufabel
discompose	distinguish	Downham
disconsolate	distraction	downward
discontent	distress	doxology
discontinue	distributor	drapery
discountenance	distrustful	drawback
discredit	disturbance	draw-bridge
discreet	dittander	dreadful
discriminate	diversifie	dreamer
disdain	divertisement	dredging box
disencumber	dividend	dripping pan
disfranchise	divination	driveller
disgraceful	divinity	Droitwich
dishonesty	divorcement	drollery
disingenuous	divulge	dromedary
dislocate	D-la-sol-re	dropical
disloyal	docibility	drudgery
dismember	Docking	druggist
disobedient	Dockley	Druids
disoblige	doctorship	Drumborough
disparage	document	drum-major
dispatch	Dodbrook	Drufton Castle
dispenser	doggedness	dubiousness
displeasure	Dolbenmen	Dublin
dispossess	dolefully	ducatoon
disprove	Dolgad-Van	dudgeon
dispute	Dolgelle	dukedom
disquiet	dolphin	dulcimer
disrepute	domestic	Dulverton
disrespectful	domineer	dumbness
dissatisfactory	dominical	Dunchurch
dissemble	donation	Duncton
dissention	Doncaster	dunghill
dissimulation	Dorchester	Dunnow
dissolvable	dormitory	Dunnington
dissolute	Dorp	Dunstable
disswade	Dorset	duskiness

E B O

E L A

E M B

dusky
dusky
dust
duster
dustiness
dusty
Dutch
duteous
dutiful
dutifully
dutifulness
duty
dumvirate
dwale
dwarf
dwarfish
dwell
dweller
dwelling
dwindle
dye
dyers-weed
Dynas-Mouth
dynasty
dyscracy
dysentery
dysury

E

Earl
earnest
ear-ring
earth
earth-quake
ear-wig
easiness
East-Ham
Eaterton
Eaton
eaves-dropper
Ebionites
ebony

ebullition
eccentric
Eccles
ecclesiastic
echo
eclipse
ecliptic
eclogue
ecstasy
edacity
eddy
Eden
edict
edification
edifice
edition
education
efface
effectual
effeminate
efficacious
efficient
effigies
efflation
effluvium
efflux
effort
effrontry
effulgence
effusion
egestion
Eglestonbridge
egregious
Egremont
Egypt
Egyptian
ejaculation
ejection
Ela
elaborate
E-la-my

Eland
elapse
elasticity
elder
election
elector
elegance
elegy
elemental
elephant
elevate
eleven
Elham
Elhill
eligible
elixir
Ellesdon
Ellesmere
ellipsis
elogy
elope
eloquence
eloquent
Elstre
Eltham
elucidate
elucubration
elusion
Elyian
Elzivir
emaciate
emaculate
embale
embalm
embargo
embark
embarras
embassy
embattle
embellish
embezzle

emblem
embrace
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endow
endure
enemy
energy
enerva
enfeeb
Enfield
enfran

E N F

E P A

E S T

emblem	engage	ephemeris
emboss	engine	Ephialtes
embowed	engrave	ephod
embowel	England	epicure
embrace	engross	epicurean
embrocation	enhance	epidemic
embroider	enigma	epigram
embroil	enjoy	epileptic
embryo	enlarge	epilogue
emerods	enlighten	episcopacy
eminent	enmity	episode
Emley	ennoble	epistle
emolument	enormity	epithet
emotion	enrage	epitome
empannel	enrich	epitomize
emperor	enrole	Epping
emphasis	ensample	Epsom
empire	enshrine	Epworth
employ	ensign	equal
emprefs	entablature	equator
emulate	entail	equilateral
emulgent	entangle	equinox
emulsion	entendre	equip
enamel	entercourse	equity
encamp	enterprise	equivocal
enchant	entertain	eradication
enchiridion	enthrall	Ercol and Castle
enclosure	enthroned	erector
encourage	enthusiasm	eremitical
encroach	entice	erratic
encumber	entity	error
endear	entrails	eschear
endive	entrap	eschew
endow	entreat	escurial
endure	enucleate	escutcheon
enemy	envious	esponsals
energy	environ	esquire
enervate	enumerate	Essenes
enseeble	enunciation	establish
Enfield	envoy	estimate
enfranchise	epact	Estri-Divodoch

E X P

E Z R

F A T

eternal	explanation	F
Ethiopian	explication	Fabulous
etymological	explicit	facetious
evacuate	explode	facilitate
evangelical	expound	facility
eucharist	express	faction
event	expulsion	factor
eventilate	expunge	faint-heartedness
evermore	extend	Fairford
evershalt	extent	Fairleigh
Evesham	exterminate	fairy
evitable	external	faithful
Eunomians	extinguish	falcon
Euphrates	extirpate	fallacious
Europe	extol	fallible
evulsion	extort	Falmouth
Ewell	extract	falsifier
exactior	extraordinary	familiar
exchequer	extravagant	familist
exclaim	extreamly	famine
exclude	extricate	famous
execute	extrude	famously
exemplary	extrusion	fanatical
Exeter	extuberance	fantastic
Exmouth	exuberance	fantastical
Exodus	exuberant	fantom
exonerate	exuberantly	fardingale
exorbitant	exulcerate	Farnham
exorcise	exulceration	farinaceous
expand	exult	farmable
expatiate	exultation	Farnborough
expectation	exuperable	Farnham
expedient	eye	farrier
expedition	eye-bright	Fardington
expel	eye-brow	farthing
expensive	eye sight	fascinate
experiment	eye-fore	fashionable
expertly	eye-teeth	fastidious
expiration	Byton	fastness
expire	Ezekiel	fasting
explain	Ezra	fatality

fathe
fatig
faulc
favo
fawn
fearf
Febr
Feck
fecul
secur
feder
feebl
fecili
fell n
fello
felon
Felto
fema
femin
feoffi
fermo
Ferm
feroc
Ferry
Ferry
serve
serve
fertile
serve
festiv
fetloc
feuda
fever
Fever
fewel
F-fa-
fiber
fiber
fick
fctiti

F I C

F L A

F L O

fatherless	fictionousness	flagitious
fatigue	fiddle	flagrancy
faulchion	fidelity	flagrant
favourable	fierceness	flagrantness
fawningly	fieriness	flambeau
fearfully	fifteenth	flamiferous
February	figary	flanconade
Peckingham	figment	Flanders
feculent	figurative	flanker
fecundity	filament	flashiness
federal	filanders	flatness
feebleness	Filey	flatterer
fecilitate	filiation	flatulent
sell monger	filligrane	flauntingness
fellowship	fillip	flaxen
felonious	filter	fleetness
Felton	filthiness	flegmatic
female	filtrate	Flemish
feminine	filtration	fleshiness
feoffment	finable	fleshiness
fermentation	finance	flexanimous
Fermingham	find	flexibility
ferocity	fineness	flexibleness
Ferrybridge	finger's-breadth	flimsiness
Ferryhill	finical	flimsy
servent	finisher	flinchers
fervency	finiteness	flippant
fertile	firmament	flippantness
servently	firmly	flittermouse
festival	first	flix-weed
fetlock	firstling	flotage
feudal	fiscal	Flora
feverish	fisher-man	Florence
Feversham	Fishgard	florentine
fewel	fistula	florid
F-fa-ut	fixedness	floridness
fibber	fiz-gig	flounce
fiber	flabbiness	flounder
fibrous	flaccidness	flourish
sickleness	flagelet	flouter
fictionous	flagging	flower-de-luce

F O R

F U T

G A R

fluctuate	fore-judge	G
fluctuation	fore-know	Gaddingly
fluellin	fore-knowledge	gaggle
fluently	fore-noon	gainfully
fluidity	fore-ordain	Gainsborough
flummery	fore-runner	gain-stand
fluster'd	fore-speak	galbanum
fluxibility	fore-teeth	Galenical
focillation	fore-thought	galeons
fodder	forgetful	gallantry
foggishness	formality	gallery
foible	fornication	galley
Fokingham	forfake	gallico-foist
foldage	forth-coming	galley pot
foilage	fortification	Gallican
follower	fortitude	gallicism
fomentation	fortunate	gallion
fondling	forward	gallop
fontanel	Foston	galloway
fool-hardiness	Foulkton	galoon
fool-hardy	foulness	gambol
foolishness	foundation	gamefom
footman	foundling	gamester
foppery	Four Crosses	gammot
foppishness	fourteenthly	gamut
forbearance	Fowey or Foy	gang
forbidden	fowling-piece	Ganges
forceps	Fowr-hope	Ganymede
forcible	fractionousness	garbler
fordage	fragrant	garbles
Fordingbridge	frailty	gardener
fore-appoint	France	gargarism
fore-arm'd	fraternity	gargarize
fore-cast	freehold	garland
fore-close	friendship	garment
fore-deem	frolicksomeness	garnish
fore-door	fructification	garnisher
fore-fathers	frugality	garnitur
fore-finger	frying-pan	garretteer
fore-front	furiousness	garrison
foreigner	futurity	garrulous

Garsta
Garth
Gasco
gastlin
Gates
Gatton
gaudin
gaudy
gavel-l
gavelo
Gayton
gaze-h
gazette
gazette
geese
geldabl
gelding
geminat
geminat
geminat
gemmo
genealo
general
general
generati
generosi
generou
Genesis
Geoeva
genial
genticul
genet
genteel
gentian
gentilism
gentlema
gentlewo
entry
enunen
ograph
ograph

G E O

G L O

G R A

Garstang
Garthley
Gascoigne
gastlines
Gates-Head
Gatton
gaudiness
gaudy
gavel-kind
gavelock
Gayton
gaze-hound
gazette
gazetteer
geese
geldable
gelding
geminat
geminat
gemmow
genealogical
generalissimo
generality
generation
generosity
generousness
Genesis
Geneva
genial
genticulate
genet
genteel
gentian
gentilism
gentleman
gentlewoman
gentry
genuineness
geographer
geography

geomancy
geometrician
Georgics
geoscropy
St. Germain
germination
gerundive
gestation
gesticulation
Gateabridge
gew-gaws
ghostliness
ghostly
giant
gibble-gable
gibbous
giddiness
Giggleswick
gigglet
gilder
gilliflow
ginger bread
gingler
girl
girt
Gisbon
Gisborough
gizzard
gladiator
gladness
Glamfor
glanders
Glaffenbury
glazier
gleam
glebe
Glew-great
glitteringness
globular
Glocester
gloominess

H h

glorification
gloriousness
glossographer
glow-worm
glutinous
Gratho
gnomonics
Gnostic
goaler
goatish
goatishness
goblet
Godalmin
Godfather
Godmother
Gofford
Gofforth
goggle-ey'd
goldilocks
Golgotha
Gomer
gondolier
gonorrhoea
gooseberry
gorgeous
gormandizer
gormandize
gospeller
gossipings
Gothic
Goths
St. Goven
governableness
governess
government
governor
gracefulness
graciously
gradual
Grafton
Graies-Thurme

G E R

grammarian
 Grampound
 grampus
 granadier
 granado
 granary
 grandame
 grandee
 grandeur
 grandfather
 grandmother
 grandfire
 granum
 grant
 grantee
 Grantham
 grantor
 granulation
 graphically
 grass
 grasshopper
 grass plat
 grassy
 gratefulness
 gratification
 gratings
 gratitude
 gratulatory
 graveness
 Gravesend
 grayhound
 grazier
 greasiness
 greatness
 Grecian
 Grecism
 Greece
 green
 green-house
 greenness
 Greenwich

G Y M

Gregorian
 grew
 grievousness
 grimness
 Grinsted
 Grismond
 griffel
 grittiness
 grizliness
 groan
 grocery
 program
 groom porter
 groop
 groove
 gross
 grotesk
 grotto
 grovelling
 ground ivy
 group
 grout-head
 growl
 grubbage
 cruel
 gruffness
 Grynton
 grumble
 guarantee
 guardian
 gudgeon
 Guild-Hall
 Guilford
 guileless
 guinea
 gun
 gun-powder
 gush
 gutter
 Guy
 gymnastics

H A R

gymnosophist
 gyration
 gyron
 H
 Habitation
 hab-nab
 Hackney
 haddock
 Hadley
 Hadenbridge
 Hadsho
 haggard
 Haggerston
 Hague
 hainous
 halbart
 halcyon
 Hales Owen
 Halesworth
 half-moon
 Halifax
 halliards
 halloo
 hallow
 Haltfield
 hamlet
 hammer
 hamper
 Hampton
 ham string
 handkerchief
 handmaid
 handsomeness
 handy
 hanger on
 Hanly
 Hanniere
 hans-en-kelder
 happiness
 harangue
 harafs

barbi
 Harb
 Harb
 hard
 Haro
 hair
 Harin
 hario
 Harle
 harle
 harlo
 harm
 harm
 harm
 harne
 harpo
 harphi
 harshi
 Harth
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 hassoc
 hastine
 Hastin
 hatefu
 Hatfie
 Have
 haugh
 havoc
 hautb
 Hawk
 hawfe
 hazar
 headb
 Head
 heath
 hearke
 heart-
 beartin
 heath-

H E A

H E R

H O L

barbinger	heathenism	herring
Harborough	heavenly	Hertford
Harbottle-Castle	heaviness	hesitate
hardy	Hebraism	hesitation
Hardwicke	hecatomb	heterodox
hair brain'd	hectic	heterogeneous
Haringworth	heedful	hexagon
harrowable	heifer	hexameter
Harleigh	heir-loom	Hexham
harlequin	Helford	hickup
harlotry	helical	hidebound
harmful	hellebore	hideousness
harmlessly	Hellenist	hierarchy
harmonious	Hellsport	hieroglyphic
harness	hell-hound	Highgate
harpooneers	hellishness	Highworth
harpichord	helm	highness
harshness	helpful	Hilary
Hartlepool	helpfulness	Hilborough
hartshorn	Hellton	Hindon
harvest	helter-skelter	Hingham
Harwich	hemicycle	Hinxley
hassock	hemlock	hippocras
hastiness	Hempsted	hissing
Hastingsden	henceforth	historian
hateful	hen-hearted	historiographer
Hatfield	herbalist	hithermost
Haverford	Herculean	Hittites
haughtiness	hereditament	Hivres
havoc	hereditary	hoarseness
hautboy	Hereford	hobgoblin
Hawkhead	heretically	hodge podge
hawser	heretage	hoggishness
hazardous	Herling	hog-grubber
headborough	hermaphrodite	hoghead
Headon	heremetical	Holbeach
heathful	hermodactyl	holioak
hearkener	herenshaw	holiness
heart-burning	Herodians	Holland
heartiness	heroical	hollowness
heath-cock	heroine	Holy well

H U C

H Y P

J E W

homage
 home
 homeliness
 Homer
 home-spun
 homicide
 homily
 homogeneous
 homologous
 honesty
 honey-comb
 honey-moon
 honorary
 honourable
 hook
 hooked
 hopeful
 hopper-ars'd
 hops
 Horeb
 hore-hound
 horizon
 horizontally
 Hornet
 horological
 horoscope
 horridness
 horse-leech
 horsemanship
 horse-raddish
 Hosanna
 hospitable
 host
 hostile
 hostility
 hot-cockles
 hotness
 hotch-potch
 household
 hubble-bubble
 hucster

hug
 hugely
 hugger-mugger
 Hugonut
 humanist
 humanize
 humanly
 humbleness
 humid
 humidity
 humiliation
 humorist
 Hunanby
 hunch-back'd
 Hungary
 hungrily
 hooks
 hurlers
 hurry
 hurt
 hurtful
 husband
 Hussars
 Hustings
 hut
 hutch
 huzza
 hydra
 hydraulics
 hydrographer
 hydromel
 hydrometer
 hydropical
 hymn
 hyperbole
 hyperbolical
 hypochondriac
 hypocrisy
 hypocrite
 hypostatic
 hypothetical

hysteric
 hysterical
 hystericalness

I

Jacobite
 jagged
 jail-bird
 Jamaica
 Iambic
 jangle
 Janizary
 jannock
 Jansanism
 January
 Japan
 japanner
 jar
 jargon
 javelin
 jaundice
 ichnography
 ichnographica
 ideal
 identical
 idiom
 idiomatically
 idleness
 idolate
 jealous
 jeerer
 Jeffrey
 Jehovah
 jejune
 jennet
 jeopardy
 jerkin
 jessamine
 jester
 Jesuit
 Jesus
 jeweller

P M M

ignoble
 ignominious
 ignoramus
 ignorance
 ignoscible
 illegal
 illegitimate
 illicit
 illiterate
 ill-natured
 illogical
 illuminate
 illusion
 illustrate
 Ilminster
 imagery
 imaginary
 imagination
 imbalm
 imbargo
 embarkation
 imbattle
 imbellishment
 imbezzel
 imbibe
 imbitter
 imbolden
 imbosom
 imbrication
 imbroider
 imbroil
 imbrue
 imitable
 imitative
 imitator
 immaculate
 immanent
 immaterial
 immature
 immediate
 immemorial

I M P

immense
 immerge
 immerse
 immethodical
 imminent
 immoderate
 immodest
 immoral
 immoveable
 immunity
 immutable
 impale
 impanel
 imparlance
 impartial
 impassable
 impatience
 impeach
 impede
 impenetrable
 impenitence
 imperative
 imperfect
 imperial
 imperious
 impertinence
 impetuous
 impious
 implacable
 implead
 implicit
 implore
 employment
 impolite
 imporous
 importation
 importune
 imposition
 impossible
 imposture
 impotence

I N G

impoverish
 impracticable
 imprecate
 impregnate
 inpress
 impression
 imprimis
 imprint
 imprison
 improbable
 improper
 impropiator
 improvable
 improvement
 imprudence
 imprudent
 impugn
 impunity
 imputation
 inaction
 inactivity
 inadvertency
 inalienable
 inamorato
 inanimate
 inarticulate
 inaugurate
 inauspicious
 incamp
 incantor
 incapacitate
 incapacity
 incarceration
 incendiary
 incense
 incentive
 incessant
 incessantly
 incestuous
 inchanter
 incident

I N C

incircle
incitement
inclemency
inclinable
incloister
inclosure
include
inclusively
incognito
incoherent
incommode
incompact
incomparable
incompass
incompetent
incomplete
incompose
incomposed
incongruous
inconnexion
inconsiderate
inconsistent
incontinent
inconvenient
incorporate
incorrect
incorrigible
incorrupt
incounter
incourage
increated
incredibility
incredulous
incroach
incumbus
inculcate
incumbent
incumbrance
incur
incurable
incursion

I N N

indearment
indebted
indecenty
indecorum
indefatigable
indelible
indemnity
indenture
independent
index
India
Indian
indicant
indictment
indifferent
indigence
indignitate
indignation
indignity
indirectly
indiscreet
indiscretion
indiscriminate
indispensable
indisposed
indisputable
indistinct
inditable
individual
indivisibility
indocible
indolence
indorse
indubitable
induce
induction
indulgent
indulto
indurable
indurate
innumerableness

I X W

inobservance
inoculation
inoffensiveness
inordinate
inquiet
inrolment
insatiable
inscription
inseparable
insolent
instrument
insupportable
intemperate
intendment
intercommoning
interment
interwoven
inthalment
intolerable
intrenchment
inveterate
invincible
invulnerable
Joan
Job
jocund
joiner
iron
irrecoverable
Isis
Israel
isthmus
justification
Justinian
juttle
jotty
juvenile
juvenileness
juvenility
ivy
Ixworth

Kay
ked
keed
keel
keen
keep
keev
keg
kell
Kell
Kell
kelp
kelts
kem
kem
ken
Ken
Ken
ken
ken
ken
kerb
ker
Ker
kern
kern
kerf
kerf
Kerf
ket
kitt
kett
Ket
kex
Key
kib
kib
kick
kick

K I C

K

Kayage
kedger
keech
keelhalling
keen
keeness
keeper
keeve
keg
kell
Kellington
Kelmark
kelp
kelter
kemb
kembo
ken
Kencall
Kenford
kenks
kennel
kennets
kerb
kerchief
Kermes
kern
kernel
kersey
kerstrel
Keswick
ketch
kittering
kettle
Kettlewell
kex key
Keyworth
kibe
kibe-heels
kick
kickshaw

K I T

kidder
Kidderminster
kidnap
kidnapper
kidney
kidney-bean
Kigworth
kilbuck
kilderkin
Kilgarren
Kilham
kill
killer
kiln
kimnel
kin
kind
kindle
kindly
kindness
kindred
Kineton
kingdom
king-like
kingly
Kingsbridge
Kingscleere
Kingston
Kinland
kinsman
kinwoman
kintal
kipe
Kirk-Burton
Kirk-Oswald
Kirkfop Foot
kirtle
kiss
kitchen
kitling
kitten

K N O

kittle
click
klittering
knack
knacker
knag
knaggy
knap
knappish
knappishness
knapple
knappy
knapsack
Knaresborough
knave
knavish
knavishly
knead
kneader
knee holm
kneel
knee-string
knell
knevels
knew
knick-knacks
knife
knight
knight-hood
Knighton
knot
knitter
knob
knobby
knock
knocker
knocking
knoll
knop
knot
knotted

LAP

L E G

L I K

knottily
knottiness
knotty
know
knowingly
knowledge
knowl
knubble
knuckle
knur
knurling
Krickieth
Kyneton

L

Labyrinth
lachrymation
Laconic
laetation
lady's-bed straw
lambent
Lamborne
lamkin
lameñefs
lamentable
Lammas
lampadary
Lanbister
Lancaster
Landäff
land-call
Landrino
land-lopper
landskip
Langport
language
Languard-Fort
languidñefs
languor
lankñefs
lantern
lapidation

lapwing
 larboard
 larceny
 larder
 large
 Larlingford
 larmier
 lasciviously
 lashers
 lassitude
 Lateran
 latitude
 lattern
 laudableness
 laudanum
 lavender
 laughing-stock
 Laving-East
 launders
 lawless
 lax
 lay-brother
 Layloff
 Lazeretto
 Lazarole
 laziness
 lead
 leaf
 leaguer
 Learmouth
 learning
 least
 lecherous
 lechery
 lecture
 Leeds
 Leeke
 leese
 leech
 leeward-way
 legacy

legible
legislative
legitimate
Leicester
Lenington
lemonade
lenity
lent
leopard
leprosy
less
Lessian
Letice
letter
Levant
levee
Liverpool
Levitical
lewdness
Lexicographer
Lexicon
liableness
libel
libellous
liberality
liberdine
libertine
librarian
license
licentious
Litchfield
lickorishness
lictors
lie
Lieutenancy
life-guard
lift
ligature
lightning
likelihood
likeness

L O F

L O U

L U X

lilack	log	lousiness
Lilburn	logarithm	Louth
limberness	logarithmical	Loughborough
limbo	logger-head	Low countries
limner	logician	lowness
limonode	log-wood	Lowther
limpness	loin	loxodromy
line	loiterer	loyalness
lineament	Lombard	lozenge
lingerer	London	lubricity
linguist	lonesomeness	lubrify
liniment	long-boat	lucidity
link-boy	longanimity	Lucifer
linsey	longevity	lucky
Linton	longitude	lucrative
Lionel	Long Meg	lucubration
liquable	Longnor	Luddeston
liquation	long-shanks	ludicrous
liquefaction	long-winded	Ludlow
liquor	looby	luff
lisper	loof	Luffenham
listener	looking-glass	luggage
litany	loom	luidore
literally	loon	lukewarmly
litigation	loop	luminous
litigious	loop-lace	lumpishness
Littleton	loofeness	lunacy
liturgy	lop	lunar
livelihood	lopper	lunatic
liveliness	loquacious	lungwort
lixivious	loquacity	luscious
lixivium	lordliness	lustful
lizard	lorimer	lustiness
lobby	loss	lunatist
lobs-pond	lot	Luther
localness	lothsom	Luton
locram	lottery	Lutterworth
locust	loudly	luxate
locution	Loughton	luxation
lodgment	lovingness	luxurious
loftiness	Louis d'ors	ly

M A J

M A N

M A R

lycanthopist	mail	mango
lycanthropy	main-mast	manhood
Lydford	main prize	Manichees
lymph	maintain	manifesto
lymphate	maintenance	mankind
lymphatic	major	manliness
Lyn	make-hate	manna
Lyn-Regis	malady	mannerly
lyre	Malaga	Manningtree
lyric	malapert	Mansfield
lyrist	male-content	man-slaughter
M	malediction	manteau
Maccabees	malevolence	mantlet
Macclesfield	malice	manuel
mace-bearer	maliciously	manufactory
macerate	maligo	manure
Machiavilian	malignancy	manuscript
macination	malkin	maple
machine	mallard	Marantha
mackarel	malleableness	marble
madam	Malling-West	Marchal-marsh
mad-cap	mallows	marshioness
maddish	Malmsbury	Maresfield
madness	malmsey	Marforio
madrigal	Malpas	Margam
magazine	maltster	margin
maggot	Malvern Magna	margrave
magic	Malvern-Perva	marigold
magician	Malwood-Castle	mariner
magisterially	mamma	marjoram
magistrate	mammoth	maritim
magnanimous	mammon	Markham
magnet	management	marker
magnificate	Manchester	marketable
magnificence	mandamus	Market-Street
magnify	mandarin	Marlborough
mag-pye	mandate	Marlow
Mahometan	mandrake	marmalade
maiden	manfulness	marmalet
majestic	mange	marmotto
majesty	mangle	marquess

M A T

M E D

M E R

marriage	mattock	mediator
Mars	mattress	mediatress
marshal	maturate	medicable
Marshall'sea	maudlin	medicinal
marsh-mallows	maugre	medicinally
martagon	maulkin	mediocrity
martial	maunder	Mediterranean
martingale	Maunday	medullary
Martlemas	mawkish	melancholic
Martinmas	maw-worms	melancholly
Martock	maxillary	melasses
martyr	maxim	Melicent
martyrdom	Maximillian	melilot
martyrology	Mid-day	meliorate
marvel	mayor	melifluous
marvellous	mayoralty	mellow
masculine	mayores	melodious
Masham	May-pole	melody
mason	mazarine	meltable
masquerade	Mazzaroth	Melton-Mowbray
massacre	mead	member
massiness	meadow	membranaceous
masterless	meagre	membrane
master-piece	meal	memoirs
mastership	mealy-mouth'd	memorable
matlich	mean	memorably
matliff	Menander	memorandum
materiality	meaning	memorial
mathematical	meanness	memory
mathematics	measurable	menace
matins	measure	mendicant
matrice	meawing	menial
matricide	meazles	menfes
marticular	meazly	mensurable
matrimonial	mechanic	mensuration
matrimony	mechanically	mercantile
matrix	mechanism	mercenary
matron	medal	mercery
matrosses	medallion	mercenariness
matted	median	merchandizing
matter	mediate	

M I G

merchandize
 merchant
 Mercury
 merciful
 Megram
 Mériden
 meridian
 meridional
 merit
 meritorious
 Merlin
 mermaid
 merriment
 Merton
 mes
 mesentery
 message
 messenger
 Messiah
 messuage
 metal
 metalline
 metaphrast
 metaphor
 meteor
 metheglin
 method
 methodist
 metropolis
 Michael
 Michaelmas
 micrography
 micrometer
 microscope
 Midhurst
 Middleton
 Middlewich
 midshipman
 Midsummer
 mid-winter
 mightily

M I S

migration
 Milbrock
 mildew
 mildness
 Mildred
 millener
 Milthorp
 Milton
 mimic
 mimical
 mimicry
 mindful
 mineral
 Minerva
 mine
 mingle
 miniature
 minion
 minister
 ministration
 minstrelsey
 minuet
 miraculous
 mirror
 mirth
 misadventure
 misbecome
 miscarriage
 miscellany
 mischance
 misconstrue
 misdoubt
 misfortune
 misgovern
 mislead
 mismanage
 misname
 mispend
 misreckon
 mis-shapen
 mistaken

M O R

midhurst
 missiness
 misuse
 mittimus
 mixen
 mixture
 mob
 mock
 Modbury
 model
 moderate
 moderation
 modesty
 modestie
 modulation
 moistness
 molestation
 Moloch
 moment
 monarchy
 Monday
 mongrel
 monkey
 monochord
 monopoly
 monsoon
 Montonist
 Montfort
 monument
 moody
 moor-hen
 mope
 moppet
 moreover
 Morgan
 mora
 Morocco
 Morpeth
 Morpheus
 mortgage
 Morton

M Y T

N E T

N I T

Moses
mosque
motherly
moveable
moulder
mountebank
Moussole
mourner
mouth
much
muck-worm
muddiness
multiply
multitude
Munster
Muntford
murky
muscle
Muscovy
music
mushroom
musket
mutable
mutation
mutter
mutton
mutual
muzzle
Myriads
Myrmidons
myrrh
myrtle
mysterious
mysteriously
mysteriousness
mystery
mystical
mysticalness
mythological
mythologist
mythology

N
Narcissus
narrative
nativity
natural
naturalize
naughtiness
naughtable
nauseous
Nazarene
nebulous
necessarily
necessitous
neck-cloth
necromancer
Needham
needfulness
needle
nefarious
negation
negative
negligence
negociate
negociator
neighbour
neighing
St. Neots
nephew
nephritic
Neptune
Nereids
nerval
nervous
nestling
Nestorians
Netherlands
nethermost
nettings
nettle
Nettlebed

never-more
Nevern
Nevin
neurology
neutral
new-fangled
Newgate
newness
Newark
Newborn
Newburg
Newbury
Newbridge
Newcastle
Newmarket
Newport
Nicene
niceness
nichils
St. Nicholas
nick-name
nick-ninny
Nicolaitans
niece
niggard
nightingale
night-raven
night-shade
night-walker
Nilometer
nimble
nimbleness
nincompoop
nineteen
ninety
ninthly
nipperkin
nipple
nisi prius
nitrous
nittiness

N O R

N U C

O B L

nobleman
nobleness
nocturnal
noddy
nodousness
noggin
noise
noisiness
nomenclator
nomenclature
nominal
nominate
nomination
nominative
non-appearance
non-compliance
non-conformist
non-conformity
Noneaton
nonentity
non-naturals
non-plus
non-resistance
nonsense
nonsensical
non-solvent
non-suit
nook
nooning
noose
Normal
Norman
Norroy
Norse
north
North-Allerton
Northampton
North-Bury
North-Church
North-Curry
northerly

North-Fleet
North-Foreland
North-Leech
northward
Northwich
Norwich
nose
nose-gay
nostril
nostrum
notable
notary
notation
nothing
notification
notify
notion
notional
notoriety
notoriousness
Nottingham
notwithstanding
Novatians
novel
novelist
novelty
November
novennial
nought
novice
novitiate
nourishing
nourishment
nourish
now
noxious
noxiousness
nubble
nubbled
nubilous
nuciferous

nuddle;
nudils
nudity
nugatory
nullife
numberless
numerable
numeral
numerator
numerous
num-scul
nunciator
nuncupation
nuncupative
nuncupativeness
nunnery
nuptial
nurse
nurture
nufance
Nutley
nutmeg
nutrition
nutritive
nuzzle
nymph
nymphal

O

Oakham
oaker
oath
oatmeal
obduracy
obedience
obeisance
obelisk
obey
objection
objector
objuration
oblation

O C C

O I L

O R I

obligate	occupation	oilet-hole
obligatory	occupier	oiliness
oblige	occur	ointment
obligee	occurrence	oister
obligement	ocean	Okeham
oblique	Okeham	Okehampton
obliterate	ostangular	oker
oblivion	octave	oldish
oblivious	octavo	oleaginous
oblong	ostogon	olifactory
obloquy	ocular	olitory
obnoxious	ocularness	Olympiad
obnubilation	oculist	Olympic
obscene	Ode-hill	Omberley
obscenely	odious	ombre
obscenity	odiously	Omega
obscurity	odor	omen
obsequious	odoriferous	ominous
obsequies	odorous	omission
observable	æconomy	omnipotence
observant	æconomics	omnipresence
observation	offend	omniscience
observator	offender	onerate
observatory	offensive	Ongar-High
observe	offering	opacity
obsolete	offertory	opacious
obstacle	office	opakness
obstinacy	officer	open-arse
obstinate	officiate	operate
obstreperous	officious	operation
obstruct	officiousness	operator
obstruction	off-scouring	ophthalmic
obtain	off-sets	opiate
obtrude	offspring	opinion
obtruder	often	opinionative
obtrusion	ostentimes	opinionated
obviate	Ogborn St. George	opium
obvious	ogee	opponent
occasional	ogle	opportune
occult	ogling	opportunately
occultness	oil-bag	opportunity

O R I

opposition
 oppression
 oppressor
 opprobrious
 opprobrium
 oppung
 optic
 optic-glass
 opulence
 opulent
 oracle
 oracular
 orange
 orangery
 oration
 orator
 oratory
 orb
 orbicular
 orbit
 orchard
 ordain
 ordalain
 orderer
 orderliness
 ordinal
 ordinance
 ordinariness
 ordinary
 ordination
 ordnance
 ordonnance
 ordure
 Orford
 organ
 organical
 organicalness
 organist
 organization
 organiz'd
 orient

O S T

oriental
 original
 originalness
 Orion
 orison
 Ork
 O:kneys
 Orlando
 Orlop
 Orlton
 Ormskirk
 ornament
 ornamentalness
 ornithologist
 ornithomancy
 Oroonoko
 orphan
 orphanism
 Orpheus
 orpiment
 Orrery
 orrice
 orthodox
 orthogonal
 orthographer
 orthographical
 orthography
 Orlton
 Orton-Maddock
 orvictan
 oscitant
 oscitation
 oser
 Ostris
 Osmadston
 Osmund-Royal
 ospray
 Ostend
 offensive
 ostentation
 ostentatious

O V F

osteology
 ostler
 ostrich
 Ostrogoths
 Oswestry
 Osyth
 otherwise
 Otley
 Ottoman
 oval
 ovation
 onbut
 oven
 over-act
 over-balance
 over-bear
 over-board
 over-charge
 over-clouded
 over-done
 over-eat
 over-fish
 over-grown
 over-hastiness
 over-laden
 overmatch
 over-plus
 over-power
 over-possess
 over-reach
 over-see
 over-shadow
 Overton
 over-top
 overture
 over-turn
 over-value
 over-weening
 overwhelm
 Ovid
 Ovingham

ovipa
 Oule
 ounce
 Ouse
 out la
 outw
 out-l
 outtra
 outru
 outw
 out-v
 ouzel
 Owe
 owle
 owne
 Oxfo
 Oxw
 oxyg
 oyer
 oyez
 ozier
 Padd
 padd
 padl
 padn
 Padd
 Padd
 paga
 paga
 paga
 Pan
 pain
 Pain
 pain
 pain
 pain
 pain
 pala
 pala

P A L

oviparous
Oulney
ounce
Ouse
out landish
outward
out-lawry
outrageous
outrun
outwardly
out-works
ouzel
Owen
owler
owner
Oxford
Oxwich
oxygen
oyer
oyez
ozier

P

Paddington
paddle
padlock
padnag
Padstow
Padua
paganism
pageant
pagod
Panrhill
pain
Pain's Castle
painsful
painim
paint
painter
paintstrainer
palace
palatable

P A P

Palatine
paleness
palinody
palish
Palladium
pallate
palliation
Pall-Mall
palmer-worm
palmestry
palm-tree
palpable
palpitation
Palsgrave
palsy
paltry
pamper
pamphlet
pan
panado
pan cake
Pancras
pancreas
Pandefts
pander
Pandora
panegyris
pangs
panic
pannage
pannel
pannier
pant
panting
pantaloons
Panthcon
panther
pantofle
pantry
papacy
papism

P A R

papist
papistry
pappa
Papplewich
pappinefs
par
parable
parabola
parabolical
Paracelfus
paradise
paradox
paragraph
parallel
paralytic
paramour
paraphrase
paraphrastical
parasceve
parboil
parcei
parchment
pardon
pardoner
parentage
parenthesis
partitioner
parley
parliament
parliamentary
parlour
parmesan
parochial
parole
parricide
party
parsimonious
parsimony
paisley
parsnip
parson

P A T

partake
partial
participate
participation
participial
particle
particular
particularly
parting
partisan
partnership
partridge
pash
pasquin
passable
passage
passenger
passibleness
passible
passion
passionate
passive
passover
passport
pastime
pastry
pastry cook
patacoon
patcher
patch box
patentee
pathetic
pathetical
patience
patientness
patriarch
patriarchship
patrician
patrimonial
patrimony
Patrington

P E N

patriot
patriotism
patrol
patron
patronage
patronize
patty
paucity
pave
pavilion
pause
pawn
pawnbroker
payable
payment
peacock
pearmain
peasant
pebble
peceadillo
peccavi
pectoral
peculiar
pedagogue
pedantic
pedigree
pedo baptism
peerdom
peevisk
peeviskness
Pegasus
Pelagians
pelican
pelmel
pelt monger
Pembroke
Pembroke
penal
penalty
penance
pence

P E R

pencil
pendant
Pendennis Castle
pendulum
penetrable
penetrate
penetration
Penguin
peninsula
Penistone
penitent
pen knife
pennant
penniless
Pennystone
Pennyfont
pennyroyal
Pentruddock
Penryn
Penance
pension
pensionary
pensive
pensiveness
pentagon
pentateuch
Pentecost
penurious
pepper
peradventure
peragrations
perambulation
perceive
perception
perch
percolation
perdition
perduration
peregrination
peremptory
peremptorily

P E R

perennial
perfect
perfection
perfidious
perfidy
perforate
perforce
perform
perfume
perfunctory
perhaps
pericranium
perilous
period
periodical
peripatetic
periphery
periphrastically
perish
perishableness
perjure
perjury
periwig
periwinkle
permanent
permission
permit
permutation
pernicious
peroration
perpendicular
perpetrate
perpetual
perpetuation
perpetuity
perplex
perquities
Persbridge
Pershore
Persia
persecute

P H I

perseverance
persevere
persist
personable
personage
personality
personate
perspective
perspicuity
perspicuous
perspiration
persuasive
persuasion
persuasiveness
pertain
pertinacious
pertinence
pertinent
perturbation
Peru
pervade
perverse
pervert
pervications
Peruvian
pestilence
petardeer
Peterborough
Peter-Church
Petersfield
Petherton-South
Petherton-North
petrification
pettisogger
pettulance
phantastical
Pharisee
pharmaceutic
philanthropy
Philip's Norton
philologer

P O M

philosopher
philosophical
phlebotomize
phlegmaticness
Phosphorus
phrase
Phrygian
physic
physognomy
pizza
pickage
Pickering
Picks
pierce
pigmy
pilchard
plant
plantation
pleasure
pliant
plough
plumb
plunder
Plymouth
pneumatical
poach
pocket
poetry
poinant
political
politician
polisher
polite
polling
Polverbatch
polygamy
polygraphy
pomander
pome-citron
pomiferus
pommel

PUE

PUR

P Y X

pompous
 pond
 ponderous
 Pontepool
 pontificate
 Pontepolcn
 pope
 popinjay
 porcupine
 pork
 portcullis
 porter
 Portsmouth
 positive
 possession
 postage
 posterior
 posthumous
 posture
 potentate
 practicable
 pragmatieal
 praise
 prawn
 preacher
 precarious
 precedence
 predestinate
 pre-eminence
 preference
 pregnancy
 prejudication
 prelate
 premature
 prenomination
 pre-occupy
 preposterous
 presbyterian
 public
 yudder
 puerility

puffing
 pugil
 puissant
 pulchritude
 Pulford
 Pulham
 Pulhely
 pullet
 pulmonery
 pulpit
 pulsation
 pulverization
 pumice
 pummel
 pumpkin
 punch
 punchanello
 punchion
 punctilio
 punctuation
 puncture
 pungency
 pungently
 punger
 punic
 punish
 punishment
 punk
 puppet
 puppy
 purblind
 purchase
 pureness
 purgation
 purgatory
 purification
 puritanism
 purling
 purloin
 purport
 purpose

purring
 purser
 purslain
 pursuance
 pursuit
 pursuivant
 Purton
 purvey
 purveyance
 purulent
 push-pin
 pusillanimity
 pufs
 pustulous
 put
 putanism
 putative
 putrid
 put-off
 putter
 putrefaction
 putrefie
 putrid
 putridness
 puttock
 putty
 puzzle
 pybald
 Pyc
 pygmy
 pylorous
 pyramid
 pyramidal
 pyramidioid
 pyromancy
 pyrotenchmy
 Pythagoras
 Pythagorean
 Pythonels
 pyx

Q U A

Q U E

Q U O

Quadragesima	quarrellsome	quibble
quadragesimal	quarrellsomeness	quick
quadrangle	quarry	quicken
quadrangular	quart	quickly
quadrant	quartan	quickness
quadrantal	quarter	quicksand
quadrat	quarter-day	quickset
quadrated	quarteridge	quicksilver
quadratic	quarterer	quick-sighted
quadratrix	quarterly	quick-witted
quadratus	quarter-master	quicky-tree
quadrimonial	quarter-round	quid
quadrupartite	quarter-sessions	quiddany
quadrupartition	quartern	quiescence
quadrifyllable	quarter-staff	quiescent
quadrivial	quarto	quiet
quadruple	quash	quieter
quadruplication	quaver	quietism
quaffer	quean	quietist
quag-mire	queen	quietly
quail	Queenborough	quietness
quaint	queer	quilt
quaintly	queerness	quilt
quaintness	quell	quince
quake	queller	quincunx
quaker	quench	quinsy
quakerism	quenchable	quint
qualification	quencher	quintain
qualify	querent	quintal
qualifying	querist	quintessence
quality	querk	quintessential
qualm	querulous	quintil
qualmishness	query	Quintilian
quandary	quest	quire
quantity	quest-man	quirister
quaretian	question	quit
quarrel	questionable	quit-claim
quarreller	questionableness	quite
quarrelled	questionist	quit-rent
quarrelling	questionless	quiver
	questor	quoted

R A M

R A V

R E C

R	Ramsbury	raze
Rabbi	Ramsey	reach
Rabbin	ram's head	re-action
rabble	rancid	readiness
race	rancour	Reading
racket	Randal	re-admission
rackoon	random	re-admit
radiancy	ranger	real
radiant	rankness	realize
radicalness	rankly	realm
radical	ransom	re-animate
radicate	ransomer	re-ascend
raddish	rantipole	reaper
radius	rapacious	rear-guard
Radnor	rapid	reason
raff	rapine	re-assemble
raffle	raparee	re-assume
rage	rapfody	re-baptize
rag-bolts	rapture	rebate
raggamuffian	rarely	rebatement
ragged	rarity	rebel
Ragland-Castle	rascal	rebellious
rag-man	rascally	rebound
ragoo	rasc	rebuff
rail	Rason-Market	rebuild
railery	rashness	rebuke
Raimund	razor	recal
rainbow	ratafia	recant
rain-deer	rather	recantation
raip	ratification	recapitulate
raife	ratifie	recede
rake	rational	receivable
rake-hell	rats-bane	receiver
rakish	rattle	receiver-general
Raleigh	rattle-snake	recent
Ralpho	ravelin	recentness
ramazan	Raven-glass	recess
ramble	ravenous	Reche
ramage	raving	recipe
Ramish	raving-mad	reciprocal
rammer	ravisher	reciprocate

R E D

R E L

R Y E

recital	re-deliverance	reluctant
recitativo	Redford	remain
recite	ridiculous	remarkable
reciter	redouble	remedy
reckoning	redound	remember
reclaim	Redruth	remit
recline	Red sea	remnant
recognition	reduction	remonstrate
recognize	redundant	remorse
recognizer	re-edifice	removeable
recoil	re entrance	rencounter
recollect	re-establish	rendezvous
recollection	re examination	renegade
recompence	reference	renovation
recommend	refinement	renounce
recommendation	reflexion	renown
recompense	reformation	rent
recompose	refractory	repair
reconcile	refresh	reply
reconcilable	refulge	reprint
record	refusal	reproach
recorder	regain	reproof
recover	regality	repute
recoverable	regard	resemble
recount	regeneration	resolve
recreate	regiment	resolute
recruit	region	resort
rectangular	register	rest
rectify	regret	rheumatism
rector	regular	rich
rectory	rehearse	riddle
Reculver	reject	ride
recumbence	reign	river
recumbent	re-imbark	robe
recurrent	rejoin	rogue
recussion	rejoice	Rome
Redborn	relation	royal
Redbridge	release	rude
reddish	relent	run
redeem	relief	rush
redeemer	religion	Rye

S A L

S A T

S C A

S		
Sabellians	Salubrious	Satisfaction
Sabines	Salver	Satisfie
fable	Salvo	Sattin
fabre	Salutary	Saturday
Sabridgworth	Samaria	Saturn
sacerdotal	Samaritan	Saturnine
sack-cloth	Samech	satyr
sacrament	samphire	satyrically
sacred	sampler	satyrist
sacrifice	sanctification	savageness
sacrilege	sanctimony	sauc-box
sadden	sanction	saucer
saddle	sanctuary	sauciness
Saddleworth	Sanbach	sausage
Sadducee	sandbag	save all
safe-conduct	sand-blind	saving
safe-guard	Sandbury	saviour
saffron	sand-eels	saunter
Saffron Walden	Sandgate-Castle	savory
sagacious	Sandhurst	Savoy
sagely	sandlin	Savoyard
Sagittary	Sandown-Castle	Sawley
sainfoin	Sandwich	Sawthey
salamander	sandy	Saxmundham
salary	Sandy-Chapel	Saxon
sale	sanguin	Saxony
Salesman	Sanhedrim	scab
salique	santer	scabbard
Salisbury	saplesness	scabbed
saliva	satiband	scabbiness
salivate	Saracen	scaffold
Salkeld	sarcasm	scaldo
sally-port	sarcastically	scalding-hot
salmigundy	sarsenet	scalp
salmon	Sar-street	scamper
Saltash	Sassafras	scandal
salter	Satan	scandalous
Saltfleet	atchel	scantiness
salt-petre	satellites	scar
salvage	satiate	scaramouch
	satiated	Scarborough

scar
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scien
scime
scirr
scisso
scoffe
scold
scold
scoll
scons
scoop
scorb
score
scorn
scorpi
Scotel
Scotla
scounc
scout
scragg
scramb
scrap
scrapen
scratch

S C R

S E C

S E N

scarcity	scream	secretary
scare-crow	scribe	sect
scarlet	scriptural	sectarian
scatter	scripturist	section
scavenger	scrivener	secularity
skeleton	scrofulous	secureness
scene	scrutinize	sedan
scenography	scud away	sedate
sceptic	sculk	Sedber
scepter	scull	Sedbury
scheme	scullion	Sedgefield
schism	sculpture	Sedgewick
scholar	scum	sediment
scholastic	scupper-hole	sedition
scholiast	scurrilous	seducer
school	scurviness	seduction
school-divine	scutcheon	seek
schoolman	seymitar	seem
science	Scythia	seen
scimeter	Scythian	seethe
scirrhous	scythe	seize
scissors	sea-chart	seldom
scoffers	sea-faring	select
scold	Sea-ford	self
scolding	sea-green	selfish
scollap-shell	seal	self-evident
seonse	seamster	selvage
scooper	Sean	semicircle
scorbutic	sea-port	semicolon
score	search	seminal
scornful	fear	semi-vowel
scorpion	fear-cloth	senate
Scotch	Searn	send
Scotland	Searn-Abby	seniority
scoundrel	seasonable	sen-night
scout	Sébastien	sensation
craggy	secant	sense
scramble	secession	sensitive
scrap	seclusion	sensory
scraper	secondarily	sent
scratches	secret	sentence

S H O

S K I

S P I

shallow	Shrawarden	Skinninggrave
shaleon	shrewdly	Skirking
shambles	Shrewsbury	skirmisher
shame-fac'd	shrivell'd	skittishness
sharp	shrubbiness	sky-colour
sharper	shiness	slab
sharp sighted	Sicilian	slanderous
sharp-witted	Sicily	slavishness
shatter	sickness	Sleaford
shaver	side-board	sleeveless
Shaw-Cross	sideral	slightness
Sheals N. and S.	Sidland	slipperiness
shear-man	Sidmouth	sloe-worm
sheep-cote	sieling	slothfulness
sheepishness	sightless	slugard
Sheffield	signal	smackering
shelf	signet	smectymnuans
Shepham	signification	smitter
shepherd	signife	Smokington
shepherdes	Silchester	snap-dragon
Sherborn	silentness	sneakingness
sheriff	illabub	Socineanism
sherry	illiness	solemnization
Sherston	Silverton	solicitude
shew-bread	silver-smith	Solomon's seal
shield	simonical	Somersetshire
shifter	simper	songster
shilling	simpleton	sophistical
Shiloh	simulation	fordid
shin-bone	sincereness	South-Moulton
shingle	snewiness	Southwold
shipwash	singleness	spacious
Shipwrack	singularity	spangle
shitten	sirenizing	Spaniard
shittle-cock	Sittingborn	speaker
shop-keeper	Sittingham	specific
shop lifting	sixteenthly	spectator
Shoreham-New	skegger-trout	speech
short-sighted	Skellingthorp	Sphinx
shoulder	skepticalness	Spilsby
shoulder-knot	skillfulness	spinage

S P R

S Q U

S T A

spinal	spread	squancy
spinet	sprig	squint-ey'd
spinner	spright	squire
spinster	spring	squirt
spire	spring-tide	St.
spirit	sprinkle	stab
spiritual	sprit sail	stable
spiritualness	sprout	Stabridge
spit	spruce	stack
spire	sprung	Stafford
spiteful	sprunt	stage
spittle	spud	stagger
splash	spue	stagnate
splatsh	spume	Stagarite
splay-footed	spun	staid
spleen	sponge	stain
splendid	spunk	stairs
splendor	spur	stake
splenetic	spuriousness	stale
splent	spurkets	stalk
splice	spurn	stall
split	spur-rial	Stamford
spoil	spurt	stamp
spoke	spy	Stanbridge
spokesman	squab	stanch
spoliation	squabble	standish
spandee	squadron	stand
sponsal	squalled	Stanford
spontaneous	squalley	stang
spool	squander	Stanhope
spoon	square	stark
sport	squareness	stannary
sportful	squash	Stanton
spot	squat	stanza
spotless	squawl	stapple
spouse	squeak	starboard
spout	squeal	starch
sprain	squeamish	stare
sprat	squeeze	starling
sprawl	squib	starry
spray	squill	start

S U P

S Y N

T A N

Sturbridge	Superlativeness	syncopation
Sturminster	Supernumerary	synod
stutteringly	superstitiousness	synodical
stypticness	supervention	synonymous
subaction	supplentory	synopsis
subaltera	supportableness	syntax
sub-consequence	suppressor	synthesis
subdivision	supramundane	synthetical
subdue	supremeness	syringe
subjection	sureness	syrup
subjunctively	surgeon	system
sublieutenant	surpassingness	ystole
sublimation	surround	
submerlion	suspect	T
submissiveness	suspiciousness	Tabernacle
subordinateness	sustenance	tablature
subscription	swagger	tabular
subservientness	swarm	tacking
substantialness	swear	Tadcalter
subterraneous	weep-stake	Taddington
subtraction	sweet-heart	Tafford Bridge
succedaneous	swept	tag-rag
successfulness	swimmer	tailor
succinctness	swine-herd	Talbot
succulentness	swinishness	tale-bearer
succumbent	switch	talisman
sudorificeness	Switzerland	talkative
sufficientness	swordsmen	tallow
suffumigation	sycophant	Tallow-down
suitableness	syllabically	tally-man
sulphurous	sylogistically	Talmud
summarinefs	Sylva	Talmudical
sumptuousness	Sylvester	Talyfarn
Sunderland	symbolical	tamarind
superabundance	symmetry	tamely
superannuation	sympathetic	Tammuz
supereminence	sympathize	tamper
superexcellent	symphony	Tamworth
superficialness	symptom	Tangier
superfluousness	synagogue	Tanhill
superintendent	synchronism	tankard
		tantalize

T E N

T H I

T I M

tantivy
 tapestry
 tapester
 tarantula
 target
 tarnish
 tart
 tartane
 Tartar
 Tartary
 tasteless
 tatterdemallion
 tattoo
 taverner
 Tavestock
 tauntingly
 tautological
 tautology
 Taunton
 Taunton-bishop's
 tawdry
 taxation
 teachable
 team
 technology
 tedious
 telescope
 temperate
 tempest
 templar
 temple
 temporal
 temporize
 tenable
 tenacious
 tenantable
 Tenbury
 Tenby
 tendency
 tender-hearted
 tenderly

tenderness
 tenement
 Teneriff
 Tenterden
 tent wort
 Teraphim
 termagant
 termination
 terraqueous
 terrestrial
 terrible
 terrific
 Terring
 territory
 terror
 testaceous
 testament
 testific
 testimonial
 testiness
 Tetbury
 Tetworth
 Tettershall
 Teutonic
 Tewksbury
 texture
 Thames
 thankfulness
 theatre
 theme
 Theocracy
 theologian
 thereafter
 thereupon
 thermometer
 thermoscope
 Therston
 Thetford
 thicken
 thicket
 Thickham

thief
 thievishtness
 thimble
 thinker
 thirstiness
 thistle
 Thong-Castle
 Thorn
 thornback
 Thornbury
 Thorncomb
 through
 Thorp
 thoughtful
 thousand
 thralldom
 thrasher
 threadbare
 threefold
 Threlkeld
 threshers
 throng
 throttle
 throwster
 Thummim
 Thursday
 Thurston
 thwart
 Tickhall
 ticking
 tickle
 tick-tack
 St. Tiddy
 tidings
 tightness
 Tilbury
 tillage
 tilt-boat
 tilt-yard
 timbrel
 timorous

T O W

T K A

T Y P

timorousness

tinker

Tinmouth

tinsel

tirewoman

Titchwoman

titillation

tit-mouse

Tiverton

tobacco

Tocester

Tockington

together

toilsome

toilsomeness

Toledo

tolerable

toleration

Toll-booth

tongue ty'd

tooth-ach

toothsome

topaz

Topcliff

toper

Tophet

topography

Topsham

topsy-turvy

torment

torrent

Torrington

torture

tory

St. Toffel

Totness

touch stone

toughly

tournament

toward

township

toy-man

tractable

tractate

tradesman

trade-wind

tradition

traduce

trage-comedy

trage-comical

tragicall

train-bands

train-oil

traiterous

tranquillity

transaction

transcend

transcribe

transcript

transfer

transfiguration

transfigure

transfuse

transgress

transgressor

transient

transition

transitoriness

translation

transmigration

transmography

transmutable

transparent

transpiration

transpire

transplant

transport

transporter

transpose

transposer

transposition

transubstantiation

transverse

trash

Travegarn

traveller

treacherous

treachery

treasonable

treasurer

Tregaron

Treleigh

tremble

trepanner

trepidation

trepidity

Tielhevimick

Trevilan

tribulation

tribunal

trickish

triennial

triflingly

Trigney

trigonometry

Trinitarians

Trinity

Tripoly

troublesome

Tubal

Tuddington

Tudworth

Tuilleries

Tukesbury

tulip

tumour

tumourous

Tunbridge

turnpike

turnpike-gate

Tweed

typographical

typographically

V A S

V E R

V I A

typographer
typography
tyrannical
tyrannically
tyrannicalness
tyrannicide
tyrannize
tyrant
tyranny
tyro

V and U

Vacuum
vade mecum
vagabond
vagary
vagrant
vain-glorious
vain-gloriousness
valedictory
valetudinary
valiant
valid
validity
valorous
valuable
vambulance
Vandal
vane
van-guard
vanish
vanity
vanquish
vaporation
vapour
vapouring
variable
variance
variation
variety
varlet
vassal

vast
Vatican
Vavafor
Vaudois
vaulter
vaunt
veal
vegetable
vehemence
vehicle
vellum
velocity
velvet
venal
venerable
veneration
venereal
venery
Venetian
vengeance
venial
Venice
venom
venomous
ventilation
venturesomeness
venturous
Venus
veracity
verb
verbal
verbatim
verberate
verberation
verbose
verboseness
verbosity
verdant
verdigrise
verderer
verditer

verdure
verger
verification
verjuice
vermicular
vermiculation
vermillion
vermin
vernacular
vernal
verse
versicle
verification
versific
vertex
vertiginous
vertigo
vervain
very
vesicle
vesicatory
vespers
vessel
vesses
vest
Vesta
Vestal
vestible
vestiger
vestment
veltry
veltry-man
vesture
vetches
veteran
vex
vexation
vexatious
ugly
ugliness
vial

V I N

V I S

U N A

viands	vine	visibleness
viaticum	vineyard	visible
vibrate	vinegar	visier
vibrating	vinew	vision
vibration	vient	visionist
vicar	vinous	visit
vicarage	vintage	visitation
vicarship	vintner	visney
vice	vintress	visual
vicious	vintry	vital
vice-admiral	violable	vitalness
vice-chancellor	violate	vitiate
vice-gerent	violation	vitious
vice roy	violence	vitiousness
vice royalty	violent	vitreal
vicinity	violentness	vitreous
vicinage	violin	vitric
vicissitude	violencello	vivace
victim	viper	vivacious
victor	virgo	vivacity
victoriously	virgin	Vivian
victory	virginals	vivid
virtuall	Virginia	vivification
virtuals	virginity	vivify
Vienna	virid	viviparous
view	virile	vixen
vigil	virility	vizard
vigilant	virtual	ulcerate
vigorous	virtuoso	ulceration
vigour	virtuously	ulcerous
vileness	virulency	ullage
vilisic	virulent	ulnag
village	virulently	ulterior
villager	virulentness	ultimate
villainous	visage	Ulverston
villainously	visera	umber
villainy	viscount	umbrage
Vincent	viscountess	umbrella
vincible	viscous	umpire
vindication	viscousness	unacceptable
vindictive	visibility	unaccountable

U N C

U N D

U N H

unaccustomed	uncivil	undress
unacquainted	unclasp	unduly
inactive	unclean	undutiful
unadvised	unclothe	uneasy
unaffected	uncomfortable	uneloquent
unaided	uncomely	unemployed
unalterable	uncommon	unequal
unanimity	unconcerned	unerring
unanswerable	unconceivable	uneven
unarmed	uncondemned	unexecuted
unnarayed	uncomfortable	unexpected
unassisted	unconquerable	unexpert
unattentive	unconquer'd	unexpressible
unattainable	unconscionable	unfairly
unavoidable	unconstant	unfaithful
unawaked	unconstrained	unfashioned
unawares	uncontrollable	unfasten
unbecoming	uncorrected	unfeigned
unbegotten	uncover	unfenced
unbelief	uncourteous	unfinished
unbeliever	uncrowned	unfitted
unbend	unction	unfold
unbidden	uncultivated	unformed
unblamable	uncustomed	unforeseen
unblind	undaunted	unfortified
unbloody	undecided	unfortunate
unboiled	undefiled	unfound
unbooted	underling	unfriendly
unbound	undermine	unfruitful
unbowed	understand	ungainful
unbridled	undertake	ungarnished
unbuilt	undervalue	ungentle
unbutton	undervalued	ungird
uncapable	undervalue	ungodliness
uncertain	under-written	ungovernable
unchangeable	undeserved	ungracious
uncharitable	undetermined	ungrateful
unchaste	undisciplined	unguent
unchristened	undistinguishable	unhabitable
unchurched	undivided	unhandsomely
uncircumpect	undoubted	unhandy

U N M

U N R

U N S

unhappily	unmindful	unremoved
unhappy	unmolested	unrepaired
unharbour	unmovable	unresolved
unharnes'd	unmould	unrespectful
unhealthful	unnatural	unrevenged
unhealthy	unnecessary	unrewarded
unhealthily	unneedful	unrighteous
unheard	unoccupied	unruly
unholy	unopposed	unsaddle
unhook	unorderly	unsafe
unhorse	unpaid	unpaid
unhusbanded	unparallel'd	unsaluted
unicorn	unpardonable	unsanctified
unison	unpeaceably	unsatisfactory
unitarian	unpeople	unfavorable
universe	unperceivable	unscriptural
unjust	unperfect	unsealed
unkind	unpleasing	unsearchable
unknown	unpolished	unseparable
unladen	unpoll'd	unserviceable
unlamented	unpremeditated	unsettled
unlawful	unprejudiced	unshaded
unlearn	unprepared	unshaken
unlearned	unprevented	unshaven
unleavened	unprofitable	unshod
unlicensed	unprosperous	unskilful
unluckiness	unprovided	unsnared
unlimited	unpruned	unsociable
unload	unpunished	unfolding
unloose	unpurged	unsolid
unlovely	unquenched	unsound
unlucky	unquiet	unspeakable
unmanly	unravel	unspent
unmanliness	unready	unspotted
unmannerly	unreasonable	unstable
unmarried	unrebukable	unstained
unmasked	unreclaimed	unsteady
unmatch	unreformed	unstirred
unmeasurable	unregarded	unstop
unmeetness	unrelenting	unstring
unmerciful	unremitted	unsuccessful

U N W

U R G

W A L

unsuitable	unwilling	urgent
unsure	unwind	urinal
untaken	unwise	urine
untamed	unworn	urn
untangle	unworthy	Ursulines
untanned	unwound	usage
unteachable	unwritten	usance
untenable	unyoke	use
unthankful	vocabulary	useful
unthinking	vocal	usher
unthoughtful	vogue	Uskmouth
unthriftilly	voice	usual
until	void	usurp
untilled	voider	usurpation
untimely	voidness	usurer
untoward	volacious	usury
untractable	volatile	utensils
untried	volition	vulnerable
untrimmed	voluble	utmost
untrue	volume	Utopian
untruth	voluntary	utter
untrustiness	voluntier	vulnerable
untunable	vomit	vulnerable
unvail	voracious	vulpine
unversed	votary	vulture
un-uniform	votive	uvula
unusual	voucher	Uxbridge
unusually	vouchsafe	voracious
unutterably	vow	voraciously
unwarily	vowel	voraciousness
unwary	voyage	Uzziah
unwashed	upbraid	Uzziel
unwasted	Uphilhaven	W
unwater'd	upright	Waggoner
unwearied	uproar	Wainfleet
unweariedness	upside	wainscot
unwedded	upstart	waiter
unwelcome	Upton	waiward
unwholesome	upward	Wakefield
unwholesomeness	urbanity	wakeful
unwiuldigess	urge	Wales

W A S

W A Y

W E D

Walfleet	waft	way-wood
Walgrove	waste	we
walsh	wastfully	weak
Walsh	wastfulness	weaken
wallet	Wat	weakly
Walloon	watch	weakness
wallop	watcher	weal
wallow	Watchet	weald
wallowish	watchful	wealth
Walmer	watchfully	wean
walnut	watchfulness	weaning
Walsingham	water	weapon
Walton	water-measure	weaponless
wamble	water-pipe	weapon-slave
wander	waterage	wear
wanton	watergang	wearied
wantonness	waterish	wearily
war	waterishness	weariness
Warbridge	watery	wearisome
warden	Watford	wearisomeness
wardenship	Wath	weary
wardmote	Watling-street	weasand
wardrobe	Watlington	weasal
Ware	wattle	weather
warfare	Wattleton	weather-by
wariness	Watton	weather-board
warm	wave waver	weather-cock
warmness	waveringly	weather-gage
Warnford	wavy	weather-glass
warrant	wawl	weather-wile
warrener	wax	weave
Warrington	waxen	weaver
Warsop	Waxham	web
Warwick	Way	webster
wash-bowl	wayfaring	wed
wasp	Wayhill	wedding
waspish	waylay	wedge
waspishly	waylayer	Wedley
waspishness	St. Waynard's	wedlock
wassel	wayward	Wedmore
wassilers	way-wifer	Wednesday

W E N

W H E

W H I

weed
 weeder
 Weedom
 week
 weekly
 weel
 ween
 weep
 weeper
 weeping
 weevil
 weigh
 weight
 weightily
 weightiness
 weighty
 Welch
 Welchpool
 welcome
 welcomeness
 weld
 welding-heat
 welkin
 well
 well-a-day
 well-born
 well-bred
 well-hole
 Wellinborough
 Wellington
 Wellow
 Wem
 Wemworthy
 Wells and Palace
 well-set
 welt
 welter
 wemb
 wen
 wench
 wencher

Wendover
 Wenlock
 went
 Wentbridge
 wept
 were
 Weremouth
 were-wolf
 wesand
 Wesel
 West
 Westbury
 Westchester
 westerlincs
 westerly
 western
 Westlow
 Westminster
 Westmoreland
 Weston
 Weston-Zaland
 Westphalia
 Westram
 westward
 wet wether
 Wetherby
 wetness
 wet-shod
 wetted
 wey
 Weymouth
 whale
 wharf
 wharfage
 wharfinger
 Whaley
 what
 Whateley
 Whatton
 wheal
 wheat

wheaten
 Wheatly-Bridge
 Wheatly-North
 wheedle
 wheedler
 wheel
 wheelage
 wheelbarrow
 wheeler
 wheelwright
 wheeze
 whelm
 whelp
 whelpish
 whelve
 when
 whence
 whensoever
 where
 whereas
 whereby
 wherefore
 wherein
 whereof
 wheresoever
 whereto
 whereupon
 wherewith
 Wherweil
 wherret
 wherry
 whet
 whether
 Whet-stone
 whey
 wheyish
 which
 Whitchurch
 Whicknor
 whiff

W H I

W H U

W I L

whiffer
whig
whiggishness
whiggism
while
whiles
whilom
whilst
whim
whimsical
whimsically
whimsicalness
whimsy
whim-wham
whindle
whine
whip
whipper
whipsaw
whipster
whipstaff
whirl
whirl-bone
whirligig
whirl-pool
whirl-wind
whish
whisk
whisker
whiskingly
whisper
whisperer
whist
whistle
whistler
whit
Whitchurch
Whit-Down
whit
white-heart
white-liver'd

white-meats
whiten
whiteness
White Parish
whither
whithersoever
whiting
whitish
Whitland
whitlow
Whitminster
Whitstable
whittler
Whitsunday
Whitsuntide
whittle
Whittlesey
Whitton
Whittingham
Whitwell
whiz
who
whole
wholly
wholsom
wholsomly
wholsomeness
whosoever
who
whoop
whore
whoredom
whoremonger
whorish
whorishly
whorishness
whorlbat
whorle
whose
whose-soever
whur

why
whick
wicked
wickedly
wickedness
wicker
wicket
Wickliff
Wickliffians
Wickomb
Wickware
widdle-waddle
wide
widely
widen
wideness
widgin
Widington
widow
widower
widowhood
width
wield
wieldness
wieldy
wife
wig
Wigan
Wigborn
wight
Wighton
Wigmore
Wigton
Wilcot
wild
wild-creature
wilderness
wildfire
wilding
wildly
wildness

WIN

WIT

WON

wile	Winfred	withholden
Wilfred	wing	within
wilful	winged	without
wilfully	wink	withsay
wilfulness	winnow	withstand
wilily	Winy	withy
williness	Winflow	witness
wily	Winsom	wittal
wilk	Winter	witwal
will	Winterborn	Witney
William	winter-green	Wivelcomb
Willing	winterly	wizard
willing	Winterton & Ness	wo
willingly	wipe	woad
willingness	wire	Woburn
willow	wire-draw	Woden
Wilmston	Wirham	woe
Wils-comb	Wirksworth	woer
Wiltshire	wisacre	woful
wimble	Wisbich	wofully
Wimbledon	wisdom	wofulness
wimple	wife	wold
Winard	wisely	wolf
Wincaunton	with	wolf's-bane
wince	withfully	Woller
winch	wisket	Wollet
Wincheomb	wisp	Wolrich
Winchelsey	wist	Wolsingham
Winchester	wit	wolvish
wind	Witborn	woman
wind-bound	witch	womanishness
winder	witchcraft	womanly
windfal	witch-clim	womb
Windham	with	Wombwell
winding	withal	won
windlass	Witham	wonder
windless	Witham-South	wonderful
window	Witheridge	wonderfully
Windfor & Castle	withdraw	wonderfulness
Windward	wither	wonderment
wine	Witheram	wont
	withhold	

W O R

W R E

Y A R

wood	worshipfully	wrestler
Woodbridge	worshipper	wretch
wooden	Worlop	wretched
woodenly	worst	wretchedly
Woodhall	worsted	Wrexham
Woodland	wort	wriggle
Woodley	worth	wright
woodmonger	Worthen	wrimple
woodpecker	worthily	wring
woodroof	worthiness	wrinkle
Woodstock	worthless	Wrinton
woodiness	worthlessness	wrist
woodward	worthy	wristband
woody	wot	write
woof	Wotton	writer
wool	wove	writhe
woollen	would	written
woolly	wound	written
woolstaple	woundily	wrong
Woolwich	wound-wort	wrongful
wop-ey'd	woundy	wrongfulness
Worcester	wrack	wrongfully
word	Wragby	wrote
work	wrangle	wroth
worker	wrangler	Wrotham
workman	wrap	wrought
workmanlike	wrapper	wrung
workmanship	wrapt	wry
Workshop	wrath	wryly
world	wrathful	wry-necked
worldly	wrathfully	Wulput
worm	wrathfulness	wyche
worm-eaten	wreak	wydraught
worm-feed	wreath	Wye
Wormshead	wreck	wyven
wormwood	wren	wyver
worn	wrench	
worry	wrest	Yatch
worse	wrestler	yap
worship	wrestling	yar
worshipful	wrestle	yard

Y E O

Y U L

Z O U

yard-arm

yard-land

yare

Yarmouth

yarn

Yarrish

yarrow

Yarum

yaspin

yate

yaw

yawl

yawn

yaws

Yaxley

ye

yes

yea

year

yearling

yearly

yeast

yelt

yell

yellow

yellowish

yellowishness

yelp

yelt

yeoman

yeomanry

Yeovil

yerk

yerker

yern

yes

yesterday

yesternight

yet

yew

yexing

yield

yieldingness

yoke

yoke-fellow

yoker

yon

yonder

yonker

yore

York

Yorkshire

you

young

younger

youngling

youngster

your

youthful

youthfully

youthfulness

yule

yule-block

yule-gaine

yule-time

Z

Zabulun

Zacharias

Zagay

Zany

zeal

zealot

zealons

zealously

zealoufness

Zechariah

zedoary

Zealand

Zell

Zelotes

zenith

Zephyrus

Zereth

zest

zeta

Zeugma

Zink

zodiac

zone

zoography

zoology

zootomy

zoophyte

Zouch



Thomas
E. L. F.
E. L. F.
E. L. F.
E. L. F.

Thomas

Thomas

